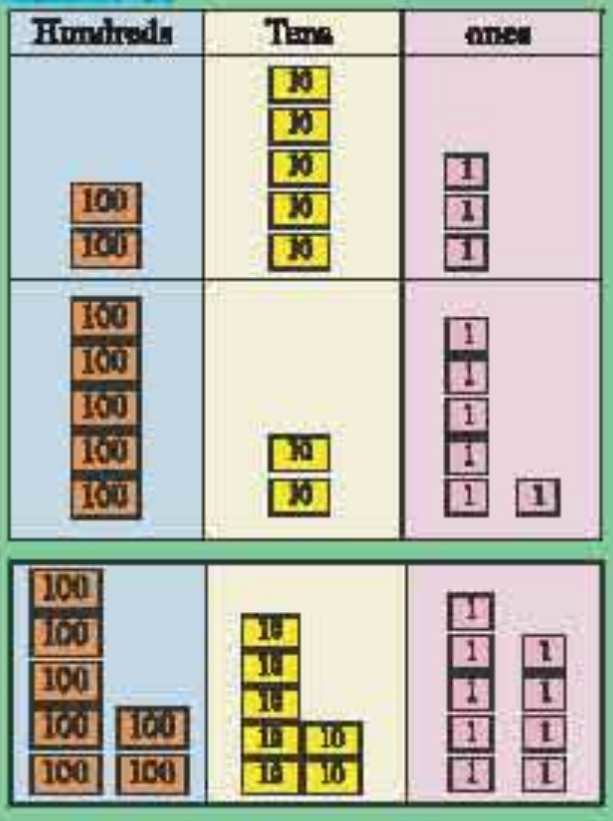
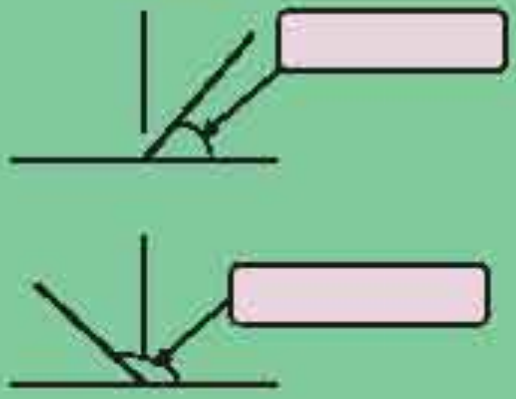
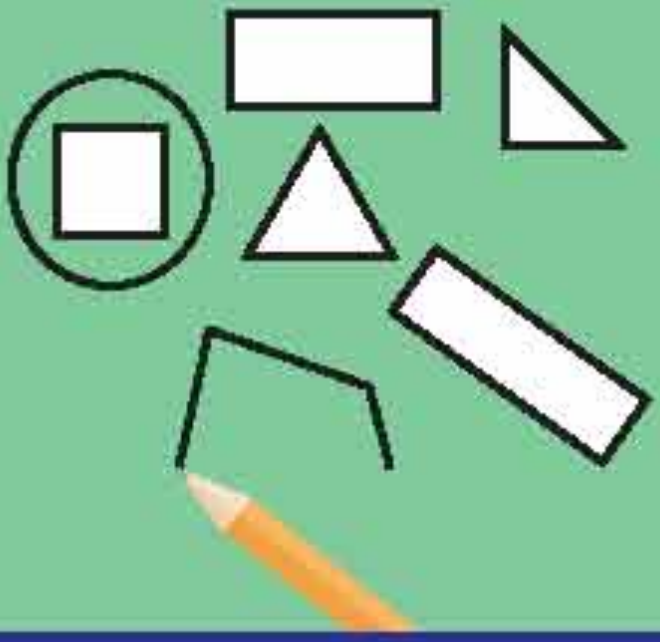
Elementary Mathematics

Class Three

253 + 526 = how much ?







779

National Curriculum and Textbook Board, Bangladesh

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Elementary Mathematics

Class Three

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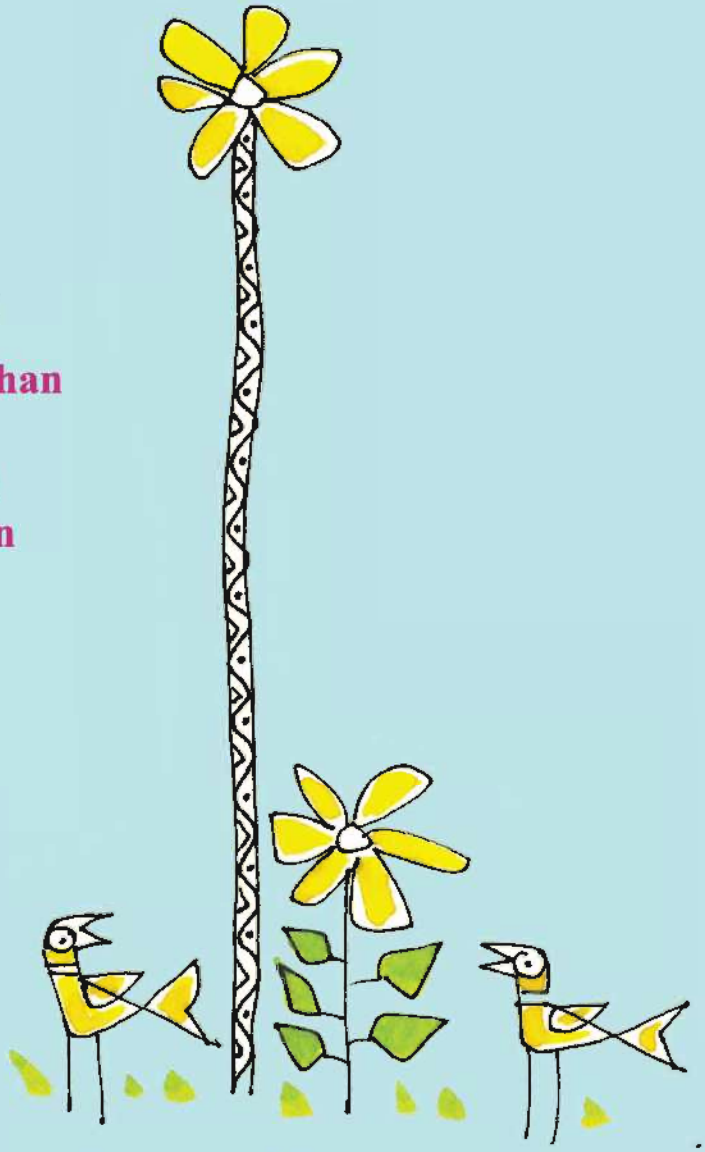

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Preface

A child is a great wonder. There is no end to the thinking about his/her world of wonder. A child is a subject of contemplation for educationists, scientists, philosophers, child specialists and psychologists. The fundamental principles of children education outlined in the National Education Policy 2010 have been defined in the light of these contemplations. The curriculum for primary education has been revised to develop a child on the potentials of his/her innate amazement, unbounded curiosity, endless joy and enthusiasm keeping in view the all-round development of children's potentials. The aims and objectives of primary education were modified in the revised curriculum of 2011.

The subject **Mathematics** is abstract one . For easy presentation of the complex terms, there are so many explanations, pictures and examples have been introduced. To create interest and for easy learning of the students "Do yourself with examples" are incorporated here. To evaluate acquired learning outcomes, sufficient exercises have been incorporated in the textbook . On the other hand, the contents of the textbook have been rearranged by following manner 'Easy to Hard' to keep students enthusiastic in the learning strategy.

To make the young learners interested, enthusiastic and dedicated, Bangladesh Awami League Government under the dynamic leadership of the Honorable Prime Minister Sheikh Hasina has taken initiatives to change the textbooks into four colors, and make them interesting, sustainable and distributed free of cost since 2009. The textbooks of Pre-primary, Primary, Secondary, Ibtedaie, Dakhil, Dakhil Vocational and SSC Vocational level are being distributed free of cost across the country which is a historical initiative of the present government.

My sincere acknowledgement and thanks to all who had helped in different stages of composition, edition, rational evaluation, printing and publication of the textbook. Though all cares have been taken by those concerned, the book may contain some errors/lapses. Therefore, any constructive and rational suggestions will be highly appreciated for further improvement and enrichment of the book. We will deem all our efforts successful if the young learners for whom it is intended find it useful to them.

Professor Narayan Chandra Saha
Chairman
National Curriculum and Textbook Board, Bangladesh

Explanation of Characters and Symbols:

1) Character: A dialogue between two students names Reza and Meena are shown in the textbook. The mathematical idea of the students would be clear through their discussion and opinion.

Reza

Meena

2) The steps have been indicated by using some symbols in the lesson.

Key Question: Key concept of the chapter has been expressed through this question.

Activity: To solve a problem students will discuss and think logically with the help of teacher.

Exercise: Students will solve problems. It will be possible for evaluation the learning development.

CONTENT

Chapter	Topics	Page
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4	Multiplication	44
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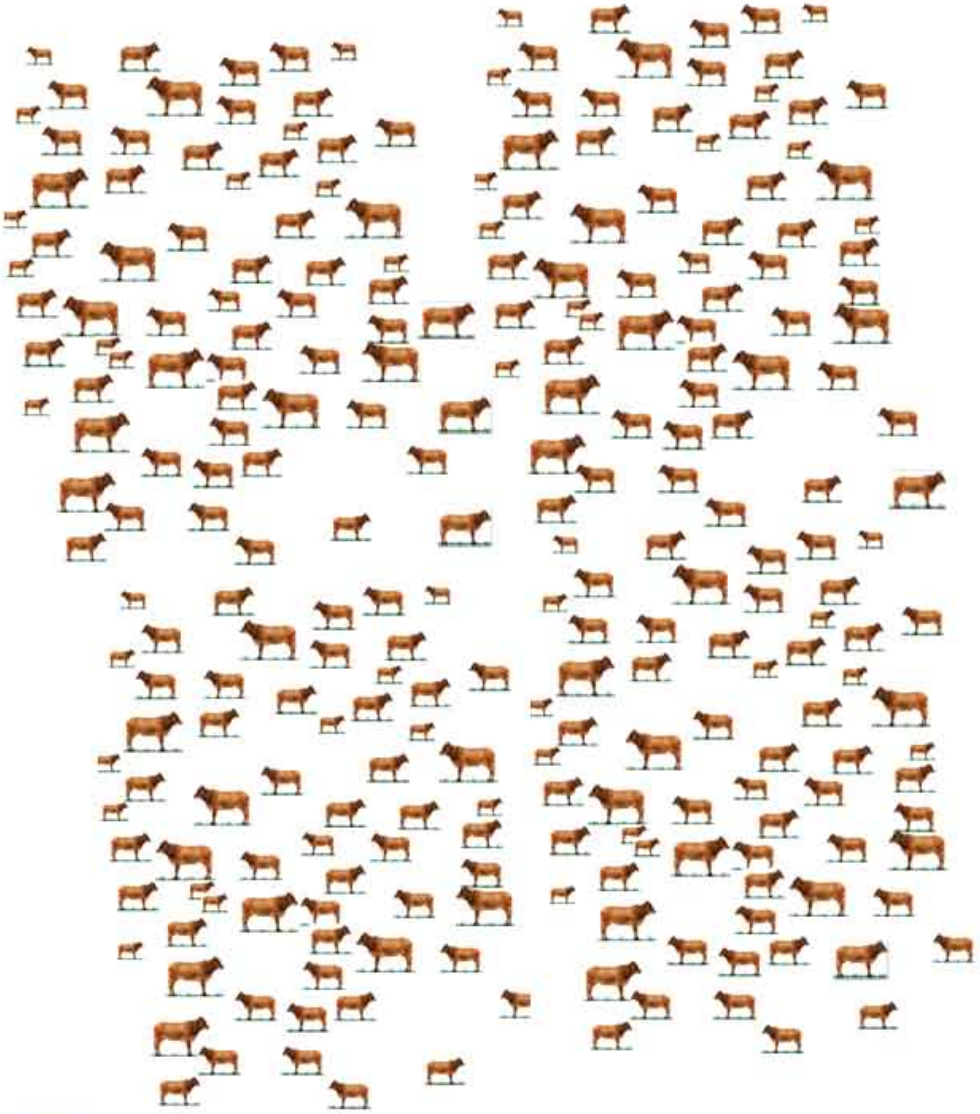
9	Measurement	95
10	Geometry	106

1. Numbers (101 – 10000)

1.1 Counting Numbers (101 -1000)

How many are there in the picture?

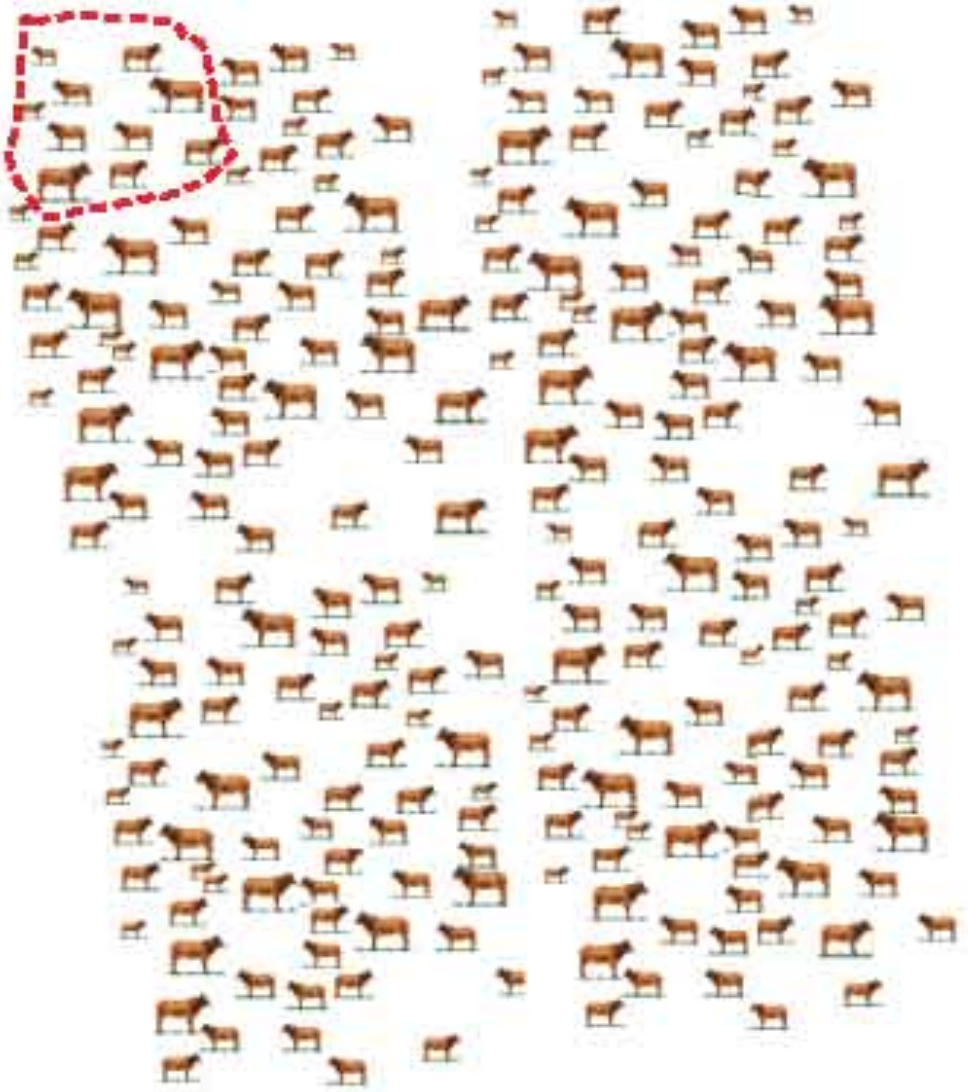
How many cows are there?



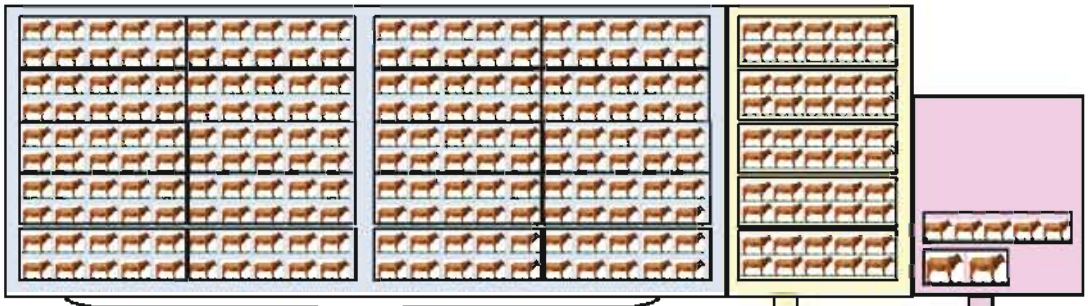
There are so many cows.
But how many cows are there ?

How to count such a big number of cows easily?

Do you remember? How did we count by making a group of ten in Grade-2?



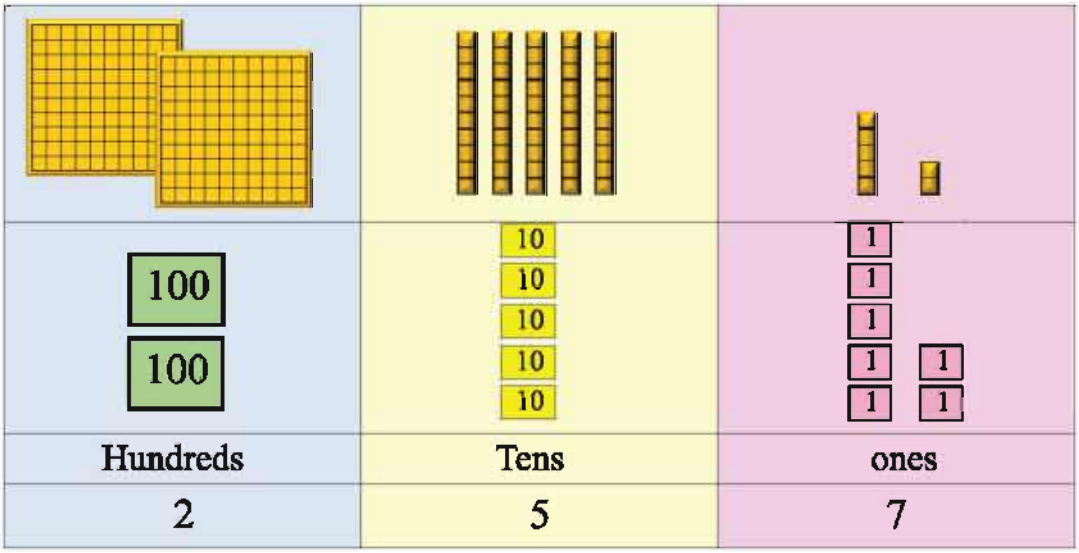
I remember well, let us make group of ten and count.



There are two one-hundreds.
Two hundred

There are five tens
Fifty

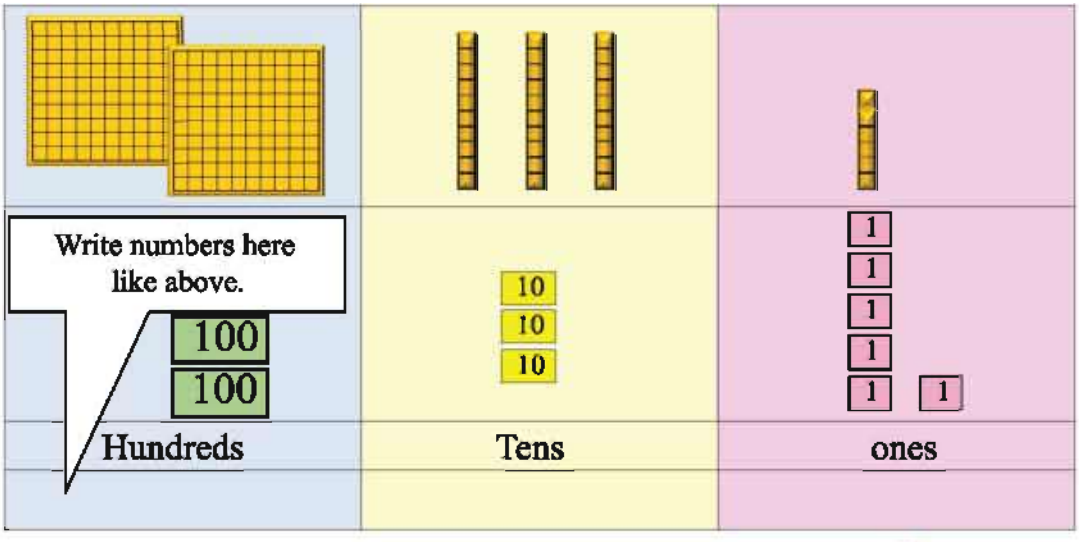
There are seven ones.
Seven



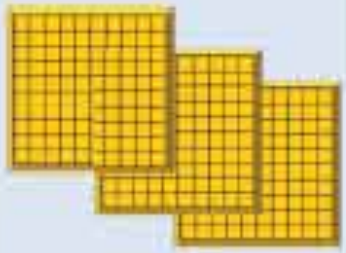
Hundreds	Tens	ones
2	5	7

This is "two hundred and fifty seven" and we write as 257.

1. How many ▪ are there?

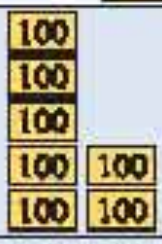


2. How many ▢ are there?

		
Hundreds	Tens	ones

3. What is the number?

How many [100] ? How many [10] ? How many [1] ?

		
Hundreds	Tens	Ones

4. Read and write in words

(1) 238 (2) 815 (3) 111

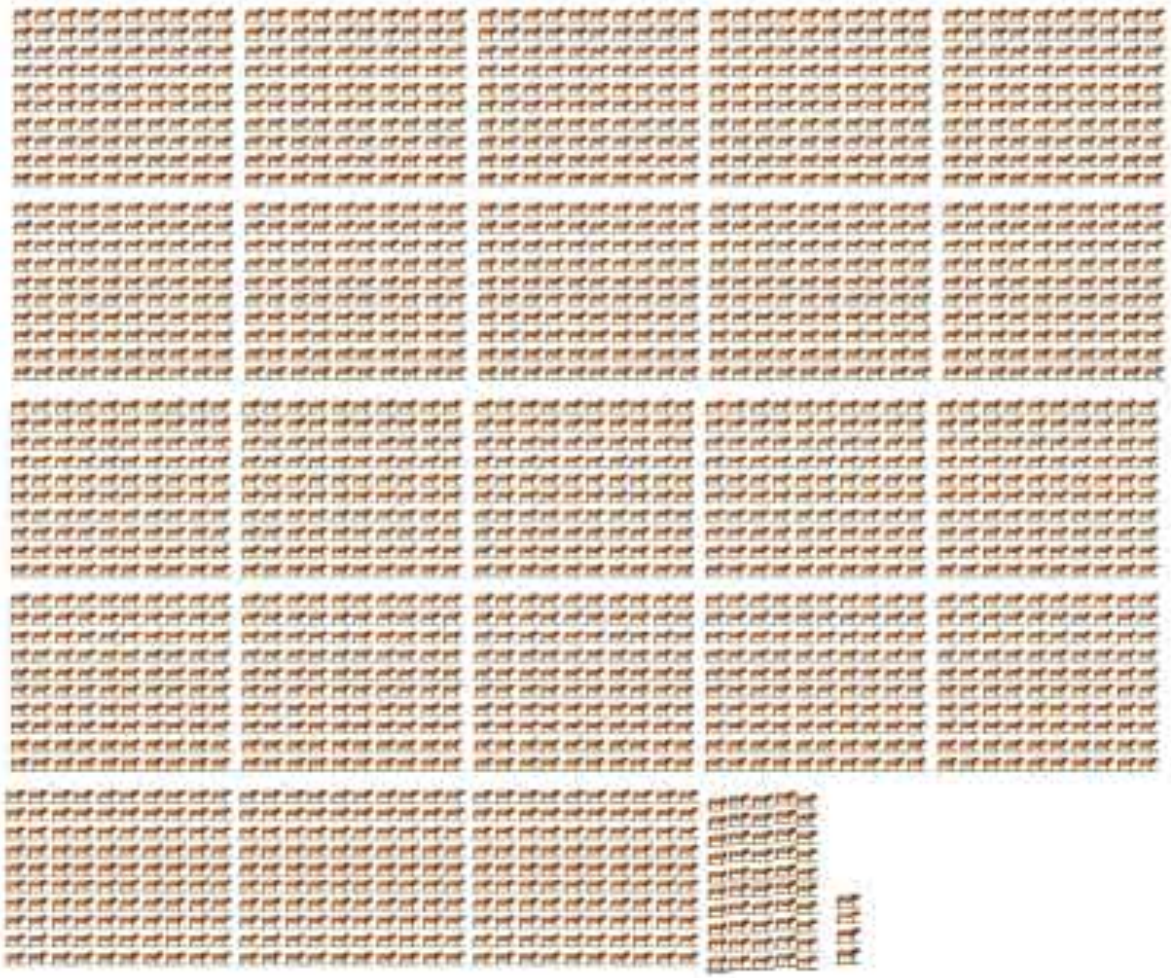
(4) 957 (5) 153 (6) 699

5. Write in number

(1) One hundred thirty five
(2) Two hundred twenty two
(3) Two hundred twelve
(4) Four hundred seventy six
(5) Eight hundred one
(6) Six hundred fifty

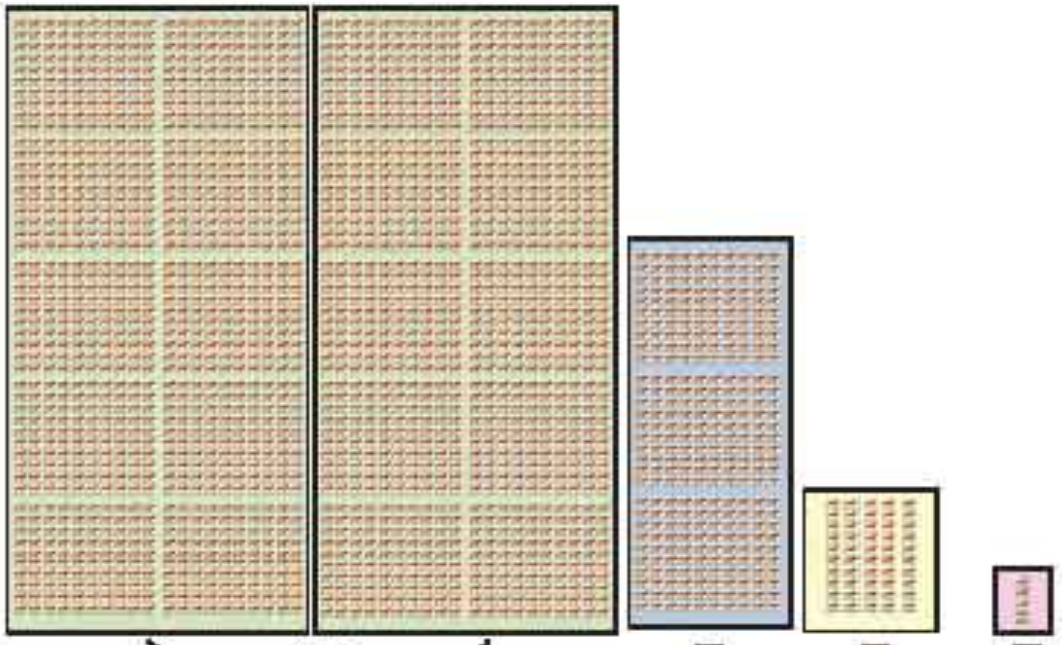
1.2 Counting Number (1001 to 10000)

How many cows are there?



As we follow method how we counted number more than hundred, we make group of ten and hundred next. In this case, there are many hundreds.

I think, there are more than 10 groups of hundred. The number made up of 10 groups of a hundred is called a thousand and it is written as 1000.



Thousands	Hundreds	Tens	Ones
2	3	5	4

The number is Two thousand three hundred and fifty four and we write 2354

1. Count and write in number

Thousands	Hundreds	Tens	Ones

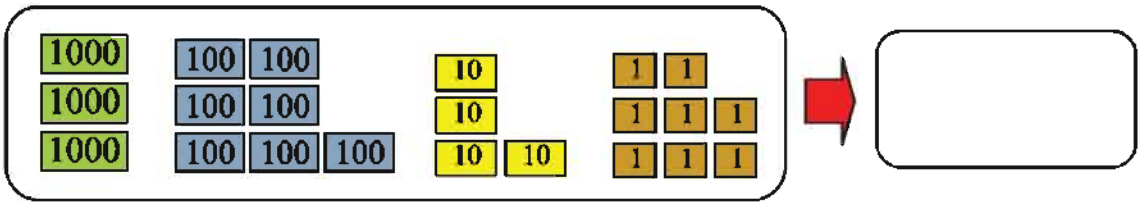
The number is……..

2. Count and write in number

1000 1000 1000 1000		10 10 10 10 10 10 10 10 10 10	1 1 1
Thousands	Hundreds	Tens	ones

The number is…….. What digit is in the hundreds place?

3. What amounts are shown ?



4. Write in figure

(1) two thousand one hundred and fifty nine

(2) eight thousand two hundred and ten

(3) three thousand and one

(4) four thousand and four hundred

(5) one thousand one hundred and eleven

(6) nine thousand six hundred and forty seven

(7) seven thousand and sixty

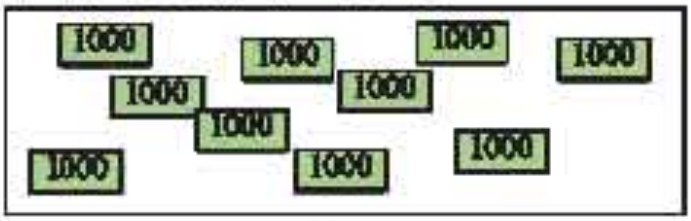
(8) two thousand two hundred and twenty two

5. Write in words.

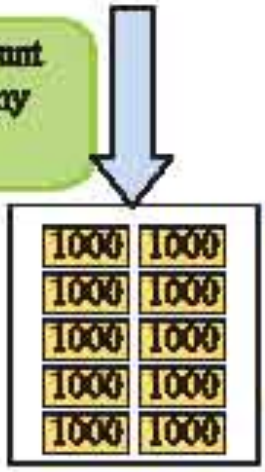
(1) 7562 (2) 5002 (3) 8300

(4) 7777 (5) 2020 (6) 6899

What is total amount?

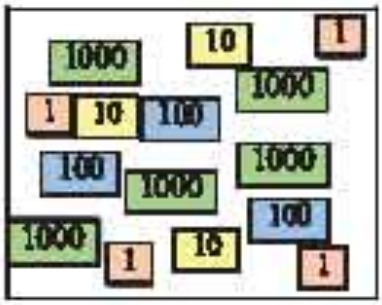


Let us count how many 1000.



There are 10 groups of thousands. We call this ten thousand. In mathematics 1000.

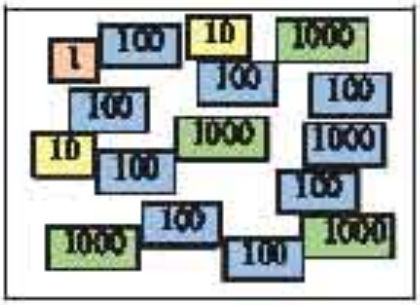
6. Count, write in figure and in word



Rearrange the number cards

Write in number

Write in word



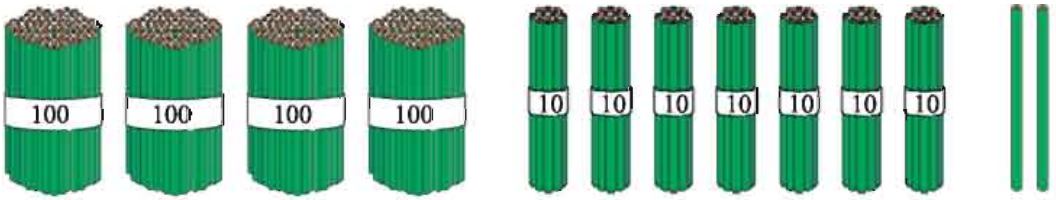
Rearrange the cards

Write in number

Write in word

1.3 Place Value

Let us count.



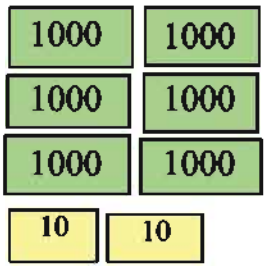
How many hundreds? How many tens? How many ones?

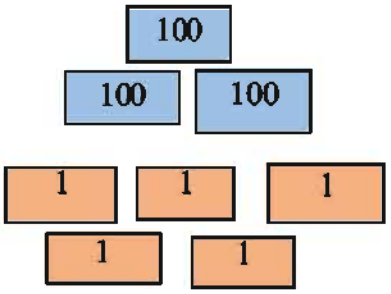
When we will count numbers up to 1000,
we will do the same.

100 100 100 100	10 10 10 10 10 10 10 10	1 1
Hundreds	Tens	ones
4	7	2

472 = 4 hundreds, 7 tens, 2 ones

How many thousands, hundreds, tens and ones?





[ ] thousands, [ ] hundreds, [ ] tens and [ ] ones

Write in number [ ]

Write in word [ ]

1. Fill in the blank boxes.

(1) 3840= ☐ thousands ☐ hundreds ☐ tens ☐ ones

(2) 4072= ☐ thousands ☐ hundreds ☐ tens ☐ ones

(3) 3008= ☐ thousands ☐ hundreds ☐ tens ☐ ones

(4) 9991= ☐ thousands ☐ hundreds ☐ tens ☐ ones

(5) 7700 = ☐ thousands ☐ hundreds ☐ tens ☐ ones

2. Fill in the blank boxes.

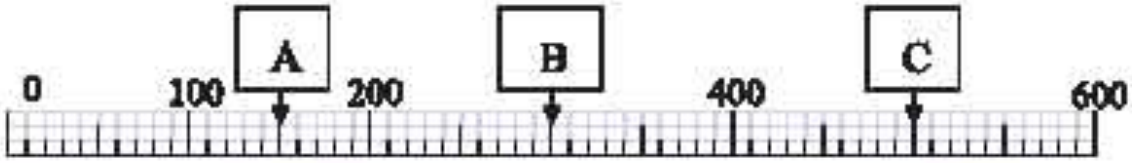
(1) 3 hundreds and 5 ones = ☐

(2) 4 thousands, 6 hundreds, 2 tens and 9 ones = ☐

(3) 5 hundreds, 4 tens and 1 ones = ☐

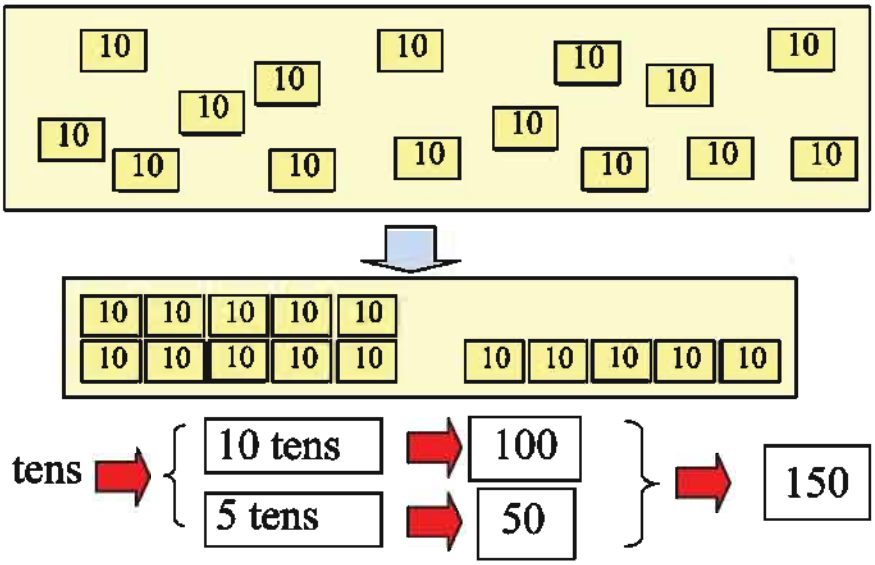
(4) 4 thousands, 7 hundreds, 9 tens and 3 ones = ☐

A line like the one below is called a number line.
Let us write numbers at A, B, and C.

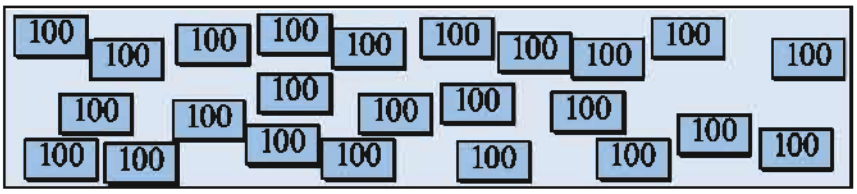


B is between 200 and 400. C is between 400 and 600. But what is number A? A is between 100 and 200.

If there are 15 ten, what is the number?



3. There are 24 hundred, what is the number?



4. Write these numbers

(1) A number made of 85 ten .
(2) A number made of 49 hundred

5. Answer the following questions.

(1) How many groups of 10 are there in 350?
(2) How many groups of 100 are there in 6200?
(3) How much is necessary for 99 to become 100?
(4) How much is necessary for 8000 to become 10000?
(5) What number is 1 more than 999?

1.4 Comparison of Numbers

1.4.1 Comparison of two numbers

Which number is greater, 3680 or 5400?

How can we compare?

When we studied comparison of numbers in Grade2,Then we compared from Tens place. So We should compare from the biggest place . (Thousand/Hundred)

In this case biggest place is thousands.

3680 5400

This case, 5 is greater than 3.
Then, we can say that, 5440 is greater than 3680

Compare the following two numbers?
2370 and 2320

This is very easy! We compare from biggest digit to smallest digit one by one. Thousands place first, next hundreds place, next tens place and finally ones place.

Thousands place and hundreds place are same number.
2370 2320

Then, we should compare tens place. 7 is greater than 2.
2370 2320

2370 is greater than 2320.

When we compare numbers, we can use the following sign.

2370 > 2320 2370 is greater than 2320
3680 < 5400 3680 is less than 5400

1. Compare the following numbers and write "<" or ">" in boxes.

(1) 100 ☐ 99 (2) 199 ☐ 200

(3) 469 ☐ 496 (4) 777 ☐ 666

(5) 1500 ☐ 1499 (6) 5439 ☐ 5438

(7) 9000 ☐ 10000 (8) 8279 ☐ 8272

2. Let us compare the following numbers and write smaller to greater and greater to smaller by using symbol.

Number	Smaller to greater	Greater to smaller
199, 200	199 < 200	200 > 199
(1) 530, 529		
(2) 1111, 1109		
(3) 2586, 2585		
(4) 8990, 8888		
(5) 9999, 10000		
(6) 7109, 7099		

Let us arrange numbers from smaller to greater.

220, 273, 210, 278

1st: Compare hundreds place. ➡ All numbers are same.

2nd: Compare tens place. ➡ $1 < 2 < 7$

Tens place of 273 and 278 are same - 7
We will compare 273 and 278

3rd: Compare ones place. ➡ $3 < 8$

$210 < 220 < 273 < 278$

Let us compare the following numbers and arrange in smaller to greater and greater to smaller order.

399, 409, 480, 379	Smaller to greater	
	Greater to Smaller	
709, 699, 735, 802	Smaller to greater	
	Greater to Smaller	
611, 689, 690, 609	Smaller to greater	
	Greater to Smaller	
1009, 809, 888, 1099	Smaller to greater	
	Greater to Smaller	

1.5 Ordinal Numbers

We studied ordinal numbers up to 10th in Grade2. We will study up to 20th in this chapter.

Let's compare 20 students' height in your class, and line up in ascending order. Each student will say their position in ordinal number.

What is your position?
How many students are taller (or shorter) than you?

Write the name of the students from smaller to greater as ordinal position

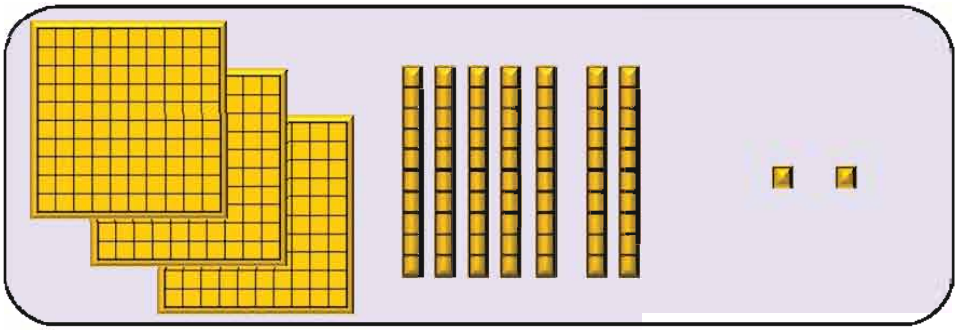
Position		Name
First	1st	
Second	2nd	
Third	3rd	
Fourth	4th	
Fifth	5th	
Sixth	6th	
Seventh	7th	
Eighth	8th	
Ninth	9th	
Tenth	10th	
Eleventh	11th	
Twelfth	12th	
Thirteenth	13th	
Fourteenth	14th	
Fifteenth	15th	
Sixteenth	16th	
Seventeenth	17th	
Eighteenth	18th	
Nineteenth	19th	
Twentieth	20th	

Let us write ordinal position according to the order of marks obtained in Mathematics.

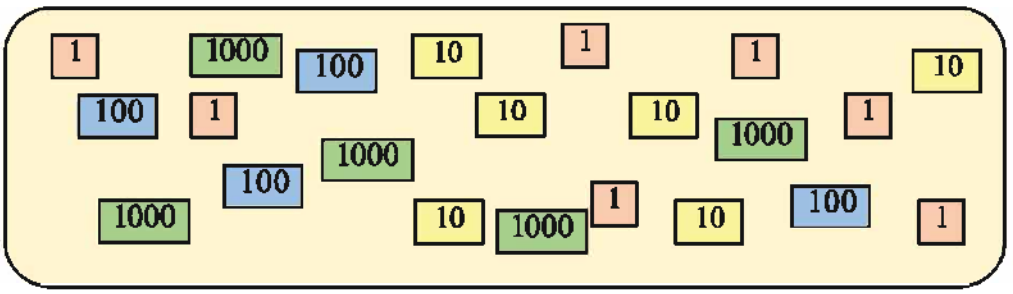
Name	Marks obtained in Math according to order	Ordinal position
Oishi	98	First
Shimu	96	
Emon	95	
Tapon	92	
Lucky	90	
Munir	87	
Shipu	85	
Kalpana	84	
David	82	
Firoz	80	Tenth
Arif	79	
Dipa	76	
Rifat	75	
Ruma	69	
Munira	65	
Mitu	63	
Nishat	60	
Happy	58	
Siam	56	
Mitali	55	

1.6 Do ourselves

1. How many ▪ are there?



2. Answer the following questions.



(1) How many groups of 1000, 100, 10 and 1 are there?

(2) What is the number?

3. Read and write in word the following numbers.

(1) 7562 (2) 5002 (3) 8300

(4) 7777 (5) 2020 (6) 6899

4. Write the following numbers.

(1) Nine hundred and seventy two

(2) Eight thousand two hundred and seventy three

(3) Five thousand and eleven

(4) Six thousand and one

(5) One thousand two hundred and thirty four

5. Fill in the ☐ boxes

(1) ☐ is the number with 4 hundred, 3 ten and 9 one.

(2) ☐ is the number with 7 thousand, 1 hundred 4 tens and 3 ones.

(3) ☐ is the number with 8 thousand and 2 ten.

(4) ☐ is the number with 5 thousand and 6 one.

(5) 3275 is the number with ☐ thousand and ☐ hundred and ☐ ten and ☐ one.

(6) 4009 is the number with ☐ thousand and ☐ hundred and ☐ ten and ☐ one.

6. Answer the following questions.

(1) How much is 62 ten?

(2) What is the number made of 39 hundred?

(3) What number is made of 74 hundred?

(4) How many ten are there in 420?

(5) How many hundred are there in 2600?

(6) How many hundred are there in 9100?

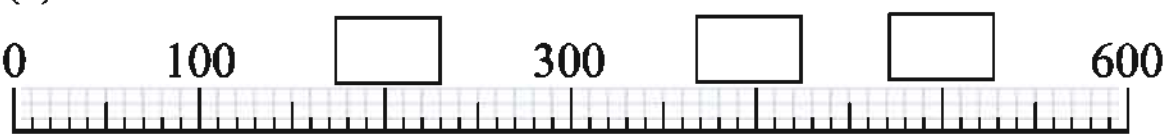
7. Write previous and next numbers

(1) ☐ 239 ☐ (2) ☐ 1000 ☐

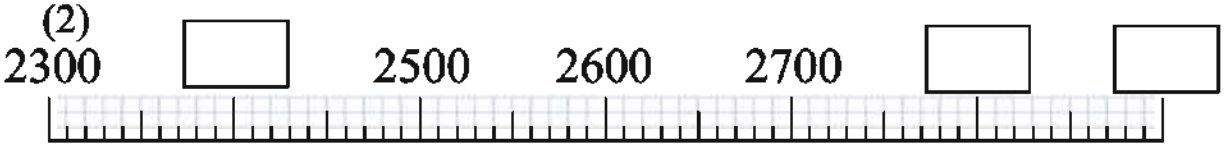
(3) ☐ 5555 ☐ (4) ☐ 9999 ☐

8. Fill in the blank spaces

(1)



(2)



9. Write the following numbers

(1) A number 1 more than 7599

(2) A number 1 less than 3000

(3) A number 10 more than 4990

(4) A number 10 less than 10000

(5) How many more than 800 do you need to make 1000?

10. Indicate greater or smaller by putting > or < symbol in the blank spaces

(1)	456		465	(2) 800		799
(3)	6391		5389	(4) 5899		6000
(5)	3609		3906		3960	
(6)	2532		2352		2235	
(7)	7999		8999		9999	

2. Addition

2.1 Review of Grade2 (Addition of two digit numbers)

Reza has 34 sheets of papers and his sister gave him 21 sheets of papers. How many sheets of papers does he have?

$$34 + 21 = \square$$

Add ones place first and tens place next. We learnt in Grade 2. In this case there is no carry. It is very simple.

$$\begin{array}{r} 34 \\ +21 \\ \hline 55 \end{array}$$

Do addition

(1) $98 + 1 =$

(2) $11 + 44 =$

(3) $71 + 28 =$

(4) $22 + 22 =$

(5) $34 + 65 =$

(6) $25 + 43 =$

(7) $\begin{array}{r} 8 \\ +71 \\ \hline \end{array}$ (8) $\begin{array}{r} 51 \\ +15 \\ \hline \end{array}$ (9) $\begin{array}{r} 47 \\ +31 \\ \hline \end{array}$ (10) $\begin{array}{r} 63 \\ +24 \\ \hline \end{array}$

If Reza and his sister have more than hundred, then how can we calculate?
Let us think about it next.

2.2 Addition (Without carrying)

I have 253 beans.

I have 526 beans.

How many beans are there in total?

We can solve by just following same method..

$253 + 526 =$ ☐

Hundreds	Tens	Ones
100 100	10 10 10 10 10	1 1 1
100 100 100 100 100	10 10	1 1 1 1 1 1 1
		1 1 1 1 1 1 1 1 1 1
100 100 100 100 100 100 100	10 10 10 10 10 10 10 10	1 1 1 1 1 1 1 1 1 1

$$\begin{array}{r} 253 \\ +526 \\ \hline \end{array}$$

$$\begin{array}{r} 253 \\ +526 \\ \hline 9 \end{array}$$

Calculate the ones place.

$$\begin{array}{r} 253 \\ +526 \\ \hline 79 \end{array}$$

Calculate the tens place.

$$\begin{array}{r} 253 \\ +526 \\ \hline 779 \end{array}$$

Calculate the hundreds place and write the answer.

1. Add :

(1) 300 + 400 =

(2) 721 + 165 =

(3) 179 + 210 =

(4) 811 + 111 =

(5)
$$\begin{array}{r} 232 \\ +354 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 462 \\ +323 \\ \hline \end{array}$$

Let us solve the following four digits addition.

1538 + 3261 = ☐

We can calculate four digit numbers same as three digits numbers.

$$\begin{array}{r} 1538 \\ +3261 \\ \hline 4799 \end{array}$$

Ones place: 8 + 1 = 9

Tens place: 3 + 6 = 9

Hundreds place: 5 + 2 = 7

Thousands place: 1 + 3 = 4

2. Add

(1) 2000 + 6000 =

(2) 1325 + 3522 =

(3) 8111 + 1888 =

(4) 4002 + 3005 =

(5)
$$\begin{array}{r} 1111 \\ +2222 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 4152 \\ +3636 \\ \hline \end{array}$$

(7)
$$\begin{array}{r} 2491 \\ +5001 \\ \hline \end{array}$$

(8)
$$\begin{array}{r} 3426 \\ +2252 \\ \hline \end{array}$$

Let us solve addition of three numbers.

	1	2	3	1
		1	0	3
+	6	2	5	4
	7	5	8	8

Ones place : 1 + 3 + 4 = 8

Tens place : 3 + 0 + 5 = 8

Hundreds place : 2 + 1 +2 = 5

Thousands place : 1 + 6 = 7

3. Add :

(1) 104 + 250 + 22 =

(2) 2222 + 3333 + 4444 =

(3) 510 + 245 + 102 =

(4) 3412 + 2131 + 4246 =

(5)
$$\begin{array}{r} 4120 \\ 234 \\ +2045 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 2141 \\ 3420 \\ +4208 \\ \hline \end{array}$$

(7)
$$\begin{array}{r} 3040 \\ 1627 \\ +4201 \\ \hline \end{array}$$

4. Add :

(1) 34 + 2 + 241 +2312 =

(2) 241 + 3104 + 2340 + 4004 =

(3) 1234 + 4321 + 1111 + 2222 =

(4) 2140 + 1425 + 2301 +4133 =

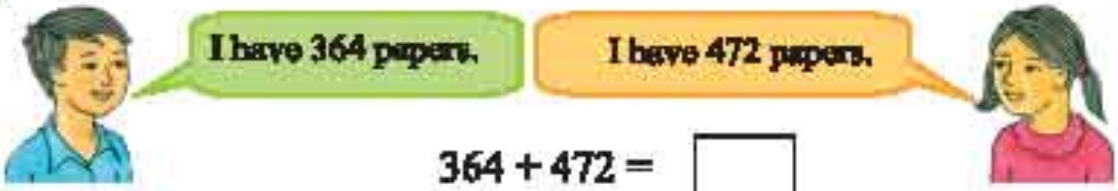
(5)
$$\begin{array}{r} 3041 \\ 402 \\ 4256 \\ +1300 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 1023 \\ 2401 \\ 3243 \\ +2310 \\ \hline \end{array}$$

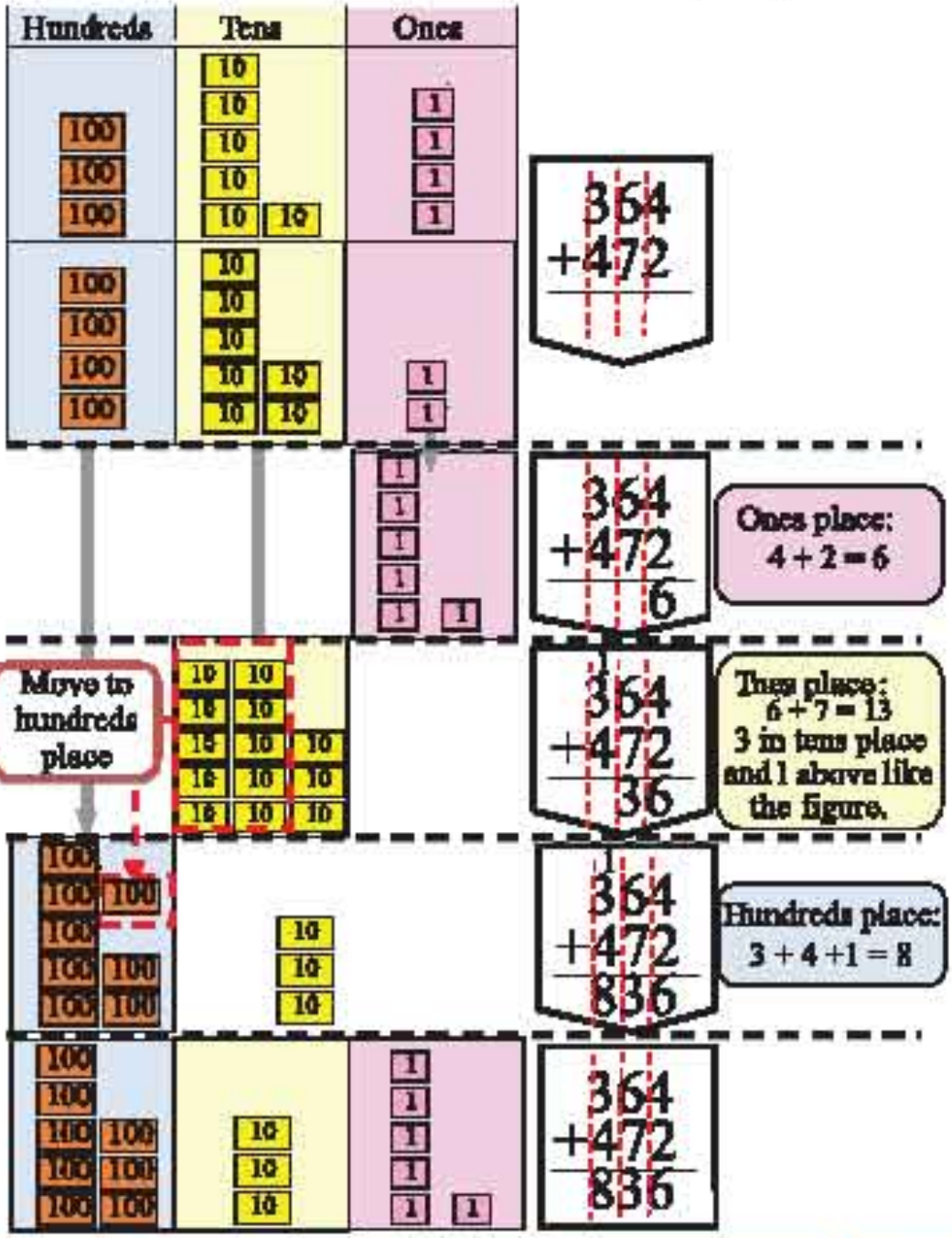
(7)
$$\begin{array}{r} 1402 \\ 3056 \\ 2210 \\ +3120 \\ \hline \end{array}$$

2.3 Addition of three digit numbers (With carrying)

How many papers are there in total?



$364 + 472 = \square$



1. Let us solve

(1) 356 + 228 =

(2) 463 + 354 =

(3) 254 + 367 =

(4) 367 + 538 =

(5)
$$\begin{array}{r} 526 \\ +338 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 273 \\ +154 \\ \hline \end{array}$$

(7)
$$\begin{array}{r} 574 \\ +248 \\ \hline \end{array}$$

(8)
$$\begin{array}{r} 639 \\ +785 \\ \hline \end{array}$$

Let us try to solve four digits addition

2785 + 5429 = ☐

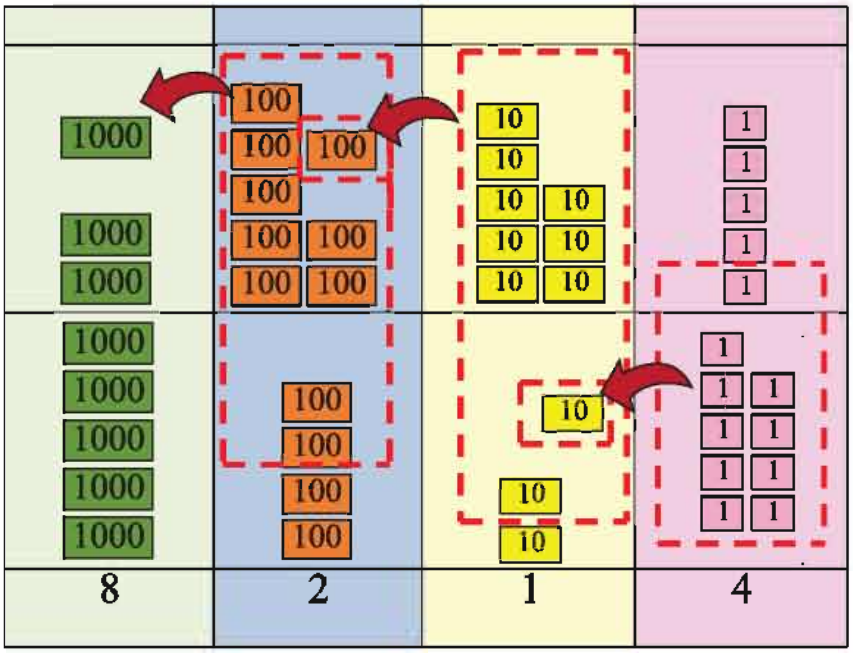
$$\begin{array}{r} 2785 \\ +5429 \\ \hline \end{array}$$

Ones place: 5 + 9 = 14

Tens place: 8 + 2 + 1 = 11

Hundreds place: 7 + 4 + 1 = 12

Thousands place: 2 + 5 + 1 = 8



2. Let us solve the addition.

(1) 1987 + 3 =
(2) 95 + 1947 =
(3) 164 + 3857 =
(4) 274 + 4783 =
(5) 7382 + 900 =
(6) 2416 + 1375 =
(7) 2538 + 5389 =
(8) 3648 + 4575 =
(9) 2797 + 7203 =
(10) 6451 + 2549 =

3. Let us solve the following addition

(1) 2697 + 8
(2) 5 + 1496
(3) 4275 + 69

(4) 99 + 1111
(5) 386 + 4764
(6) 4267 + 754

(7) 8726 + 1274
(8) 3179 + 2694
(9) 4444 + 1629

(10) 3128 + 5614
(11) 8264 + 1487
(12) 6539 + 2483

Let us solve the following addition of three numbers

$3847 + 2651 + 1705 =$ ☐

	3	8	4	7
	2	6	5	1
+	1	7	0	5

Ones place : $7 + 1 + 5 = 13$

Tens place : $4 + 5 + 0 + 1 = 10$

Hundreds place : $8 + 6 + 7 + 1 = 22$

Thousands place : $3 + 2 + 1 + 2 = 8$

4. Add

(1) $35 + 427 + 1385 =$

(2) $418 + 721 + 596 =$

(3) $3333 + 4444 + 2222 =$

(4) $4521 + 1839 + 2917 =$

(5)
$$\begin{array}{r} 84 \\ 581 \\ +2799 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 1694 \\ 168 \\ +2442 \\ \hline \end{array}$$

(7)
$$\begin{array}{r} 4391 \\ 1584 \\ +3625 \\ \hline \end{array}$$

5. Add

(1) $2461 + 389 + 3908 + 88 =$

(2) $976 + 4089 + 1990 + 2808 =$

(3) $2841 + 1749 + 3937 + 1196 =$

(4) $2684 + 1909 + 1890 + 2890 =$

(5)
$$\begin{array}{r} 3098 \\ 89 \\ 900 \\ +5696 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 1675 \\ 6761 \\ 906 \\ +2099 \\ \hline \end{array}$$

(7)
$$\begin{array}{r} 4248 \\ 1275 \\ 2151 \\ +1362 \\ \hline \end{array}$$

2.4 Do ourselves

1. Solve the following calculations

(1) 23 + 141 + 3025 = (2) 403 + 75 + 5821 =

(3) 2571 + 4022 + 1958 = (4) 7621 + 547 + 1014 =

(5)
$$\begin{array}{r} 1409 \\ 95 \\ +\ 380 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 5208 \\ 1926 \\ +2785 \\ \hline \end{array}$$

(7)
$$\begin{array}{r} 2930 \\ 1639 \\ +5427 \\ \hline \end{array}$$

2. Let us solve.

(1) 2190 + 9 + 1859 + 5192 = (2) 4293 + 2571 + 380 + 1999 =

(3) 3800 + 1311 + 2794 + 1296 = (4) 1999 + 2105 + 4034 + 1098 =

(5)
$$\begin{array}{r} 1638 \\ 62 \\ 7007 \\ +\ 891 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 3645 \\ 1794 \\ 930 \\ +2749 \\ \hline \end{array}$$

(7)
$$\begin{array}{r} 1009 \\ 3742 \\ 2974 \\ +1443 \\ \hline \end{array}$$

3. Lusai Chakma earned Tk. 680 in the first week, Tk. 1000 in the second week and Tk. 890 in the third week from his grocery shop. Find the total amount he earned in these three weeks.

Earned in the first week	Tk. 680
Earned in the second week	Tk. 1000
Earned in the third week	Tk. 890
Total amount earned	=

4. For annual sports competition, Sujan runs daily 100 meters, 400 meters and 800 meters. How many meters does he run daily?

5. Limu finished reading three story books containing 261 pages, 275 pages and 350 pages in a month. How many pages did she read in that month?

6. In a pond, 1200 fry of Rui, 985 fry of Katla and 765 fry of Mrigel were dropped. How many fry were dropped in that pond?

7. 530, 736 and 890 mangoes were plucked from 3 mango trees of Mina's fruits garden. How many mangoes were plucked from the garden?

8. There are 620 rose, 832 China rose and 946 marigold saplings in a nursery. How many saplings are there in that nursery?

9. In the book fair, Raju sold books worth Tk. 1150 on the first day, Tk. 1225 on the second day, Tk. 1575 on the third day and Tk. 2000 on the fourth day. What was the total worth of books he sold in four days?

10. In a cricket match England scored 375 runs and Australia 405 runs in first innings. In second innings, Australia scored 370 runs and England 400 runs. What was the total runs the two teams scored in the match?

3. Subtraction

3.1 Review

We studied how to calculate subtraction in Grade2

Let us try to solve the following calculation.

Do subtraction

$$53 - 37 = \square$$

Calculation start from ones place same as addition. We cannot subtract 7 from 3. We should borrow 10 from tens place and subtract.
13 − 7 = 6

We borrowed 1 tens from 5 tens. (5-1=4), then we will substract 3 tens from 4 tens

Let us solve the following calculation

(1) 45 − 18 =

(2) 41 − 23 =

(3) 64 − 35 =

(4) 82 − 45 =

(5)
$$\begin{array}{r} 33 \\ -27 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 72 \\ -58 \\ \hline \end{array}$$

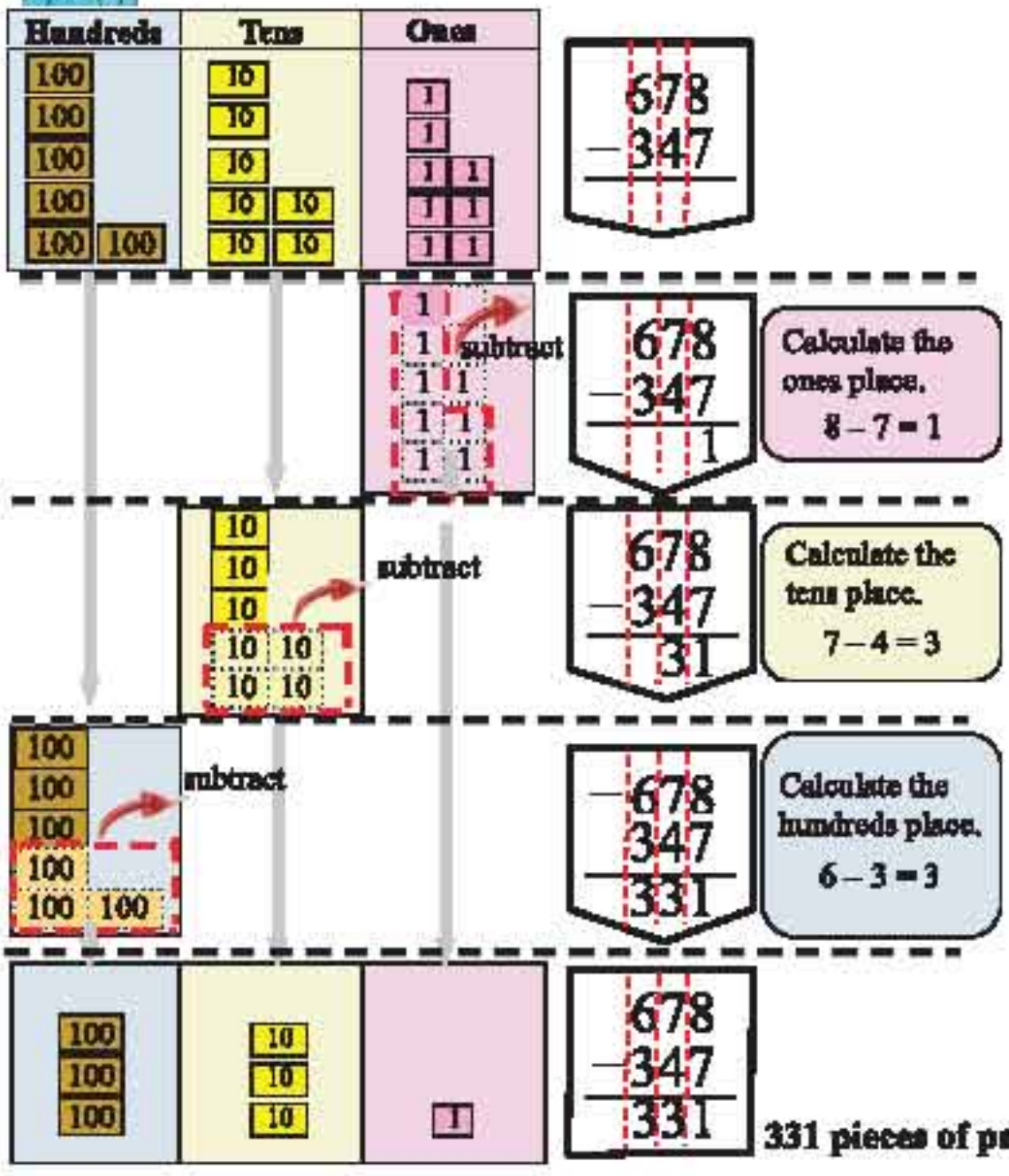
(7)
$$\begin{array}{r} 54 \\ -29 \\ \hline \end{array}$$

(8)
$$\begin{array}{r} 98 \\ -59 \\ \hline \end{array}$$

3.2 Subtraction (without carrying)

Reza has 678 pieces of paper. He gave 347 pieces of paper to Shima , how many pieces of paper remaining?

Let us think about Math sentence for this question.
678 – 347 =



1. Let us solve the following subtraction

(1) $700 - 200 =$

(2) $573 - 321 =$

(3)
$$\begin{array}{r} 597 \\ -397 \\ \hline \end{array}$$

(4)
$$\begin{array}{r} 758 \\ -237 \\ \hline \end{array}$$

Let us think about four digit subtraction

$7685 - 1473 =$ ☐

$$\begin{array}{r} 7685 \\ -1473 \\ \hline \end{array}$$

Ones place : $5 - 3 = 2$

Tens place : $8 - 7 = 1$

Hundreds place : $6 - 4 = 2$

Thousands place : $7 - 1 = 6$

Thousands	Hundreds	Tens	Ones
1000 1000 1000 1000 1000 1000 1000	100 100 100 100 100 100	10 10 10 10 10 10 10 10 10 10	1 1 1 1 1
1000 1000 1000 1000 1000 1000 1000 subtract	100 100 100 100 100 100 100 subtract	10 10 10 10 10 10 10 10 10 10 subtract	1 1 1 1 1 subtract
6	2	1	2

2. Let us solve the following subtraction

(1) $5000 - 4000 =$

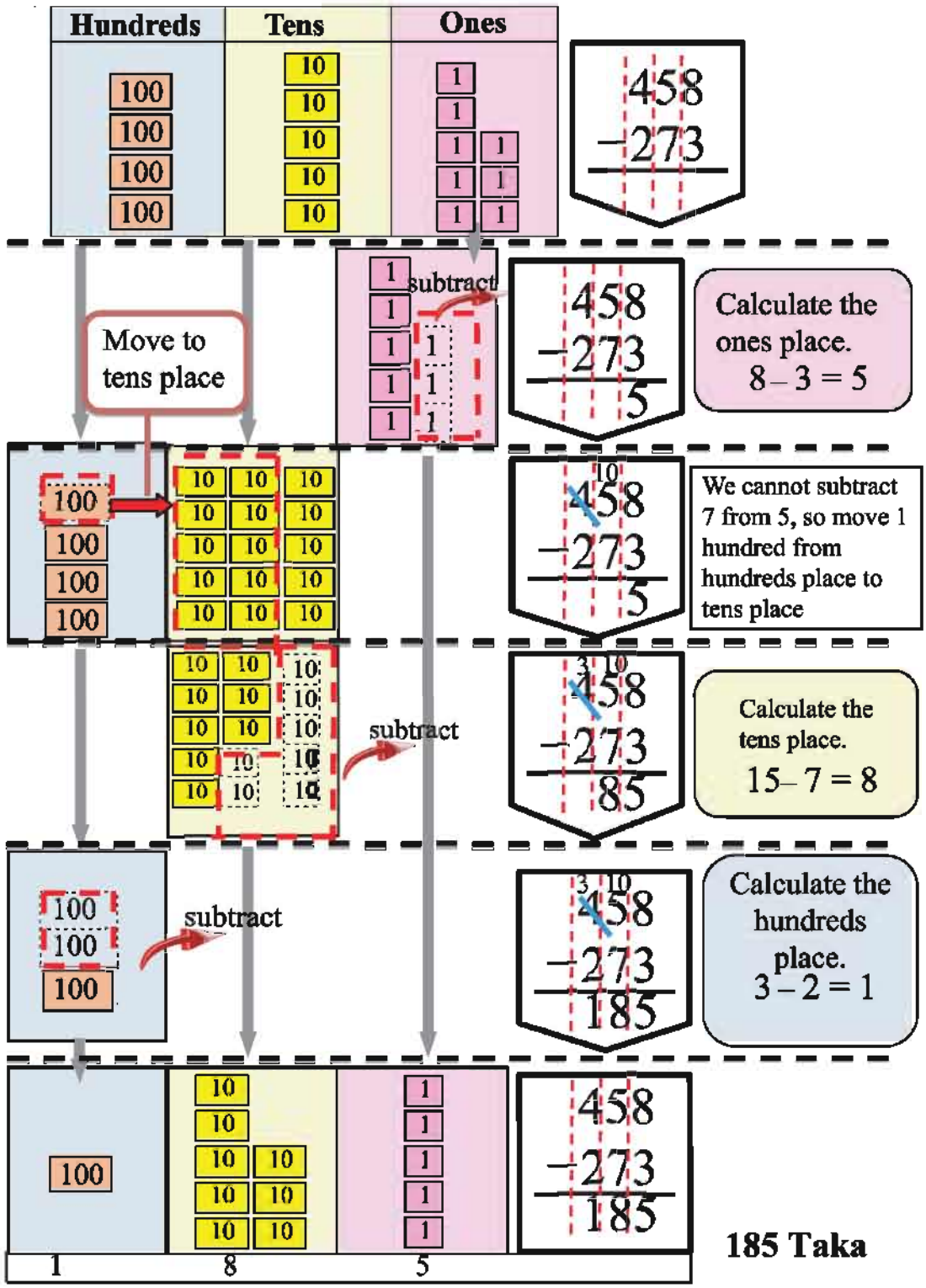
(2) $4100 - 2100 =$

(3)
$$\begin{array}{r} 6483 \\ -4131 \\ \hline \end{array}$$

(4)
$$\begin{array}{r} 7549 \\ -5438 \\ \hline \end{array}$$

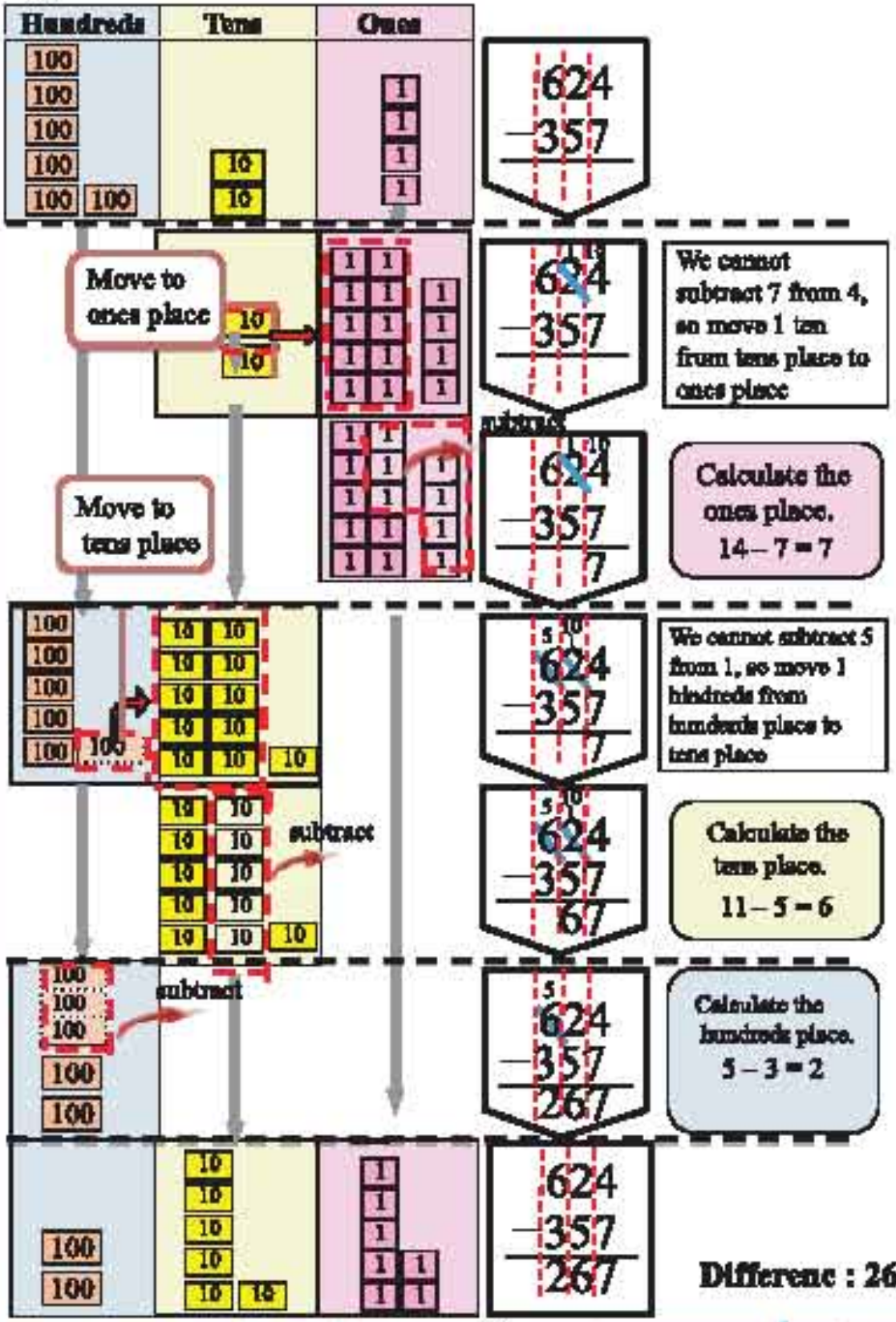
3.3 Subtraction (with carrying)

Reza has Tk 458 and Hea has 273Tk.
How many taka Reza has more than Hea?

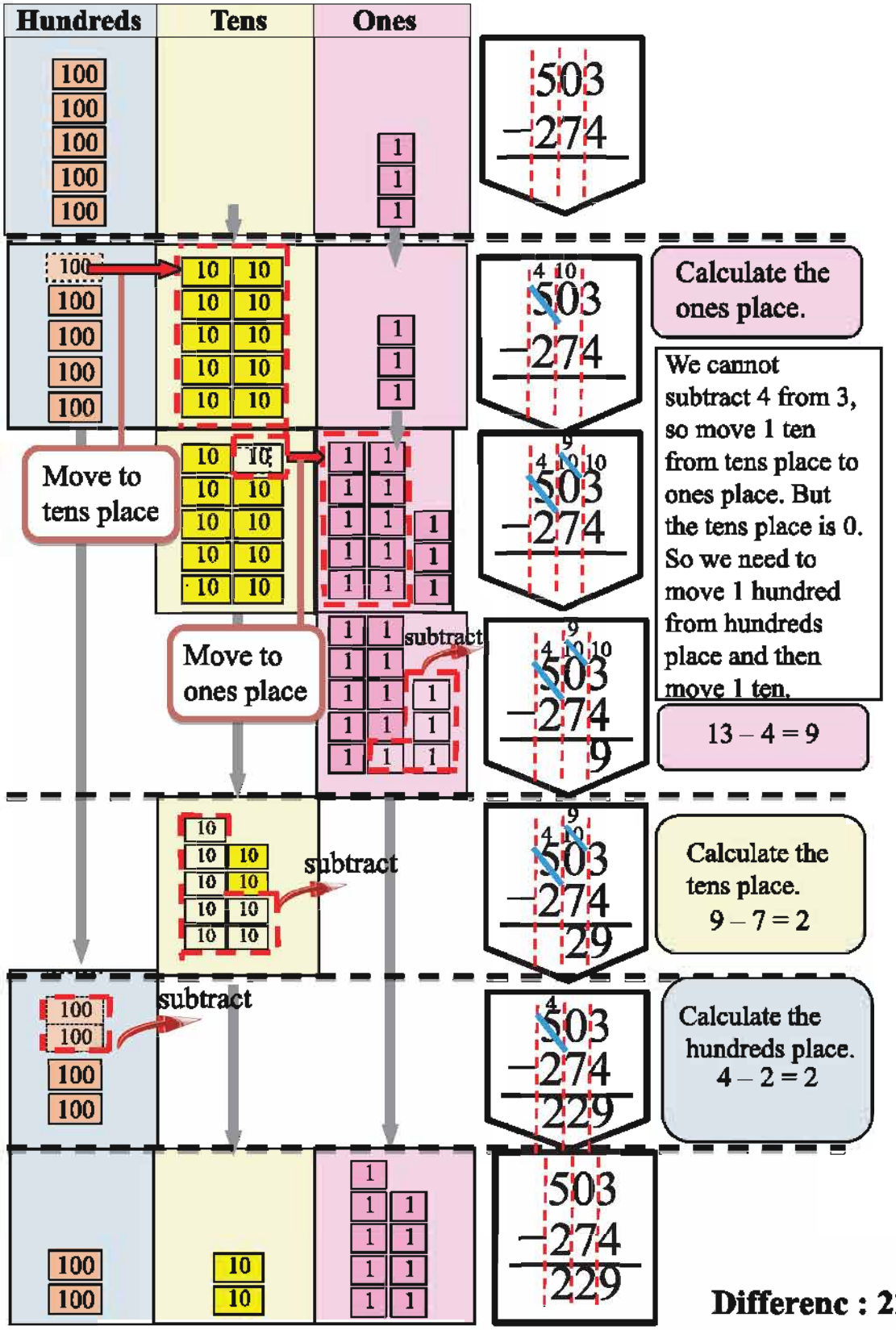


185 Taka

Let us think how to calculate 624 – 357


Hundreds
Tens
Ones
Move to ones place
Move to tens place
subtract
subtract
624
357
We cannot subtract 7 from 4, so move 1 ten from tens place to ones place
Calculate the ones place.
14 – 7 = 7
We cannot subtract 5 from 1, so move 1 hundreds from hundreds place to tens place
Calculate the tens place.
11 – 5 = 6
Calculate the hundreds place.
5 – 3 = 2
267
Difference : 267

Let us think how to calculate 503 − 274


Hundreds
Tens
Ones
503
−274
Calculate the ones place.
We cannot subtract 4 from 3, so move 1 ten from tens place to ones place. But the tens place is 0. So we need to move 1 hundred from hundreds place and then move 1 ten.
Move to tens place
Move to ones place
subtract
13 − 4 = 9
Calculate the tens place.
9 − 7 = 2
subtract
Calculate the hundreds place.
4 − 2 = 2
Differenc : 229

1. Let us solve the following subtraction

(1) 235 – 18 =

(2) 530 – 90 =

(3) 720 – 280 =

(4) 439 – 273 =

(5) 853 – 379 =

(6) 963 – 465 =

(7)
$$\begin{array}{r} 590 \\ -\ 84 \\ \hline \end{array}$$

(8)
$$\begin{array}{r} 453 \\ -\ 76 \\ \hline \end{array}$$

(9)
$$\begin{array}{r} 540 \\ -280 \\ \hline \end{array}$$

(10)
$$\begin{array}{r} 782 \\ -436 \\ \hline \end{array}$$

(11)
$$\begin{array}{r} 942 \\ -608 \\ \hline \end{array}$$

(12)
$$\begin{array}{r} 341 \\ -196 \\ \hline \end{array}$$

2. Let us solve the following subtraction

(1) 300 – 25 =

(2) 500 – 3 =

(3) 307 – 139 =

(4) 400 – 139 =

(5) 721 – 253 =

(6) 513 – 249 =

(7)
$$\begin{array}{r} 104 \\ -\ \ 8 \\ \hline \end{array}$$

(8)
$$\begin{array}{r} 600 \\ -\ 37 \\ \hline \end{array}$$

(9)
$$\begin{array}{r} 402 \\ -158 \\ \hline \end{array}$$

(10)
$$\begin{array}{r} 803 \\ -609 \\ \hline \end{array}$$

(11)
$$\begin{array}{r} 317 \\ -179 \\ \hline \end{array}$$

(12)
$$\begin{array}{r} 711 \\ -437 \\ \hline \end{array}$$

Let us think about four digit subtraction

$7204 - 4817 =$ ☐

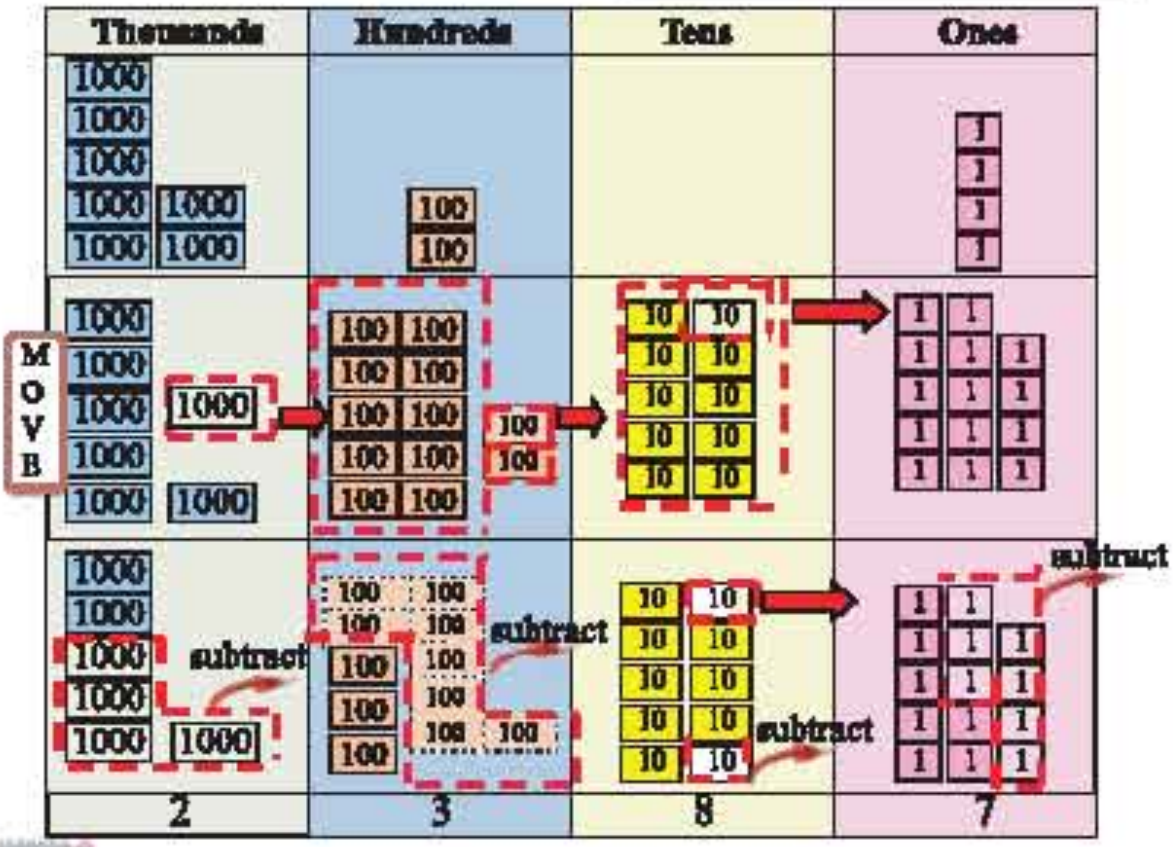
	7	2	0	4
−	4	8	1	7

Ones place : $14 - 7 = 7$

Tens place : $9 - 1 = 8$

Hundreds place : $11 - 8 = 3$

Thousands place : $6 - 4 = 2$



3. Let us solve the following subtraction

(1) $5370 - 438 =$

(2) $4942 - 1829 =$

(3) $8074 - 2882 =$

(4) $6300 - 3527 =$

(5)
$$\begin{array}{r} 3400 \\ -\ 521 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 8672 \\ -5984 \\ \hline \end{array}$$

(7)
$$\begin{array}{r} 8302 \\ -4727 \\ \hline \end{array}$$

3.4 Let us do ourselves

1. Subtract the following

(1) 594 – 230 = (2) 805 – 479 =

(3) 3036 – 1978 = (4) 5931 – 3595 =

(5)
$$\begin{array}{r} 601 \\ -\ 58 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 5020 \\ -2794 \\ \hline \end{array}$$

(7)
$$\begin{array}{r} 9003 \\ -1738 \\ \hline \end{array}$$

2. Monthly income of Nazma Begum is Tk. 8950 and her monthly expenditure is Tk. 8725. How much is her monthly savings?

3. In a cricket game, Bangladesh scored 386 runs and Australia scored 242 runs. Which team scored more runs and how many more runs?

4. In the book-fair Mr. Summon sold books worth Tk. 3260 on the first day and worth Tk. 5785 on the second day. How many taka more did he get on the second day.

5. Luna has Tk. 2650 and Suma has Tk.1230. How many more taka does Luna have?

6. In a nursery there are 988 Rose saplings and 672 China rose saplings. How many more Rose saplings are there in that nursery?

7. Mr. A. Karim went to market with Tk. 1250. He spent Tk. 960. How many taka remained with him?

8. What number should be subtracted from 475 to get 250?

9. In a school, there are 1475 students. The number of girl students is 930. What is the number of boy students?

10. The number of population of Syedpur village is 3876. The number of males is 1943. What is the number of females?

3.5 Relation of addition and subtraction

Is there any relationship between addition and subtraction?

We learnt in Grade 2. Do you remember?
We solved the following question.

We had some apples. After selling 5 of them, we now have 7 apples. How many apples did we have at first?

I remember it. We set the calculation
□ – 5 = 7
From which we get 7
after diduction of 5

Subtraction and addition are inverse operation like the following
12 – 5 =7, 7 + 5 = 12 and also 12 – 7 =5, 12 – 5 = 7

Minuend	–	**Subtrahend**	=	**Difference**		
Difference	+	**Subtrahend**	=	**Minuend**		
Minuend	–	**Difference**	=	**Subtrahend**		

Fill the following blanks

(1) 34 – 8 = □

26 + □ = 34

□ – 26 = 8

(2) 65 – □ = 40

40 + 25 = □

□ – 40 = 25

(3) □ – 32 = 54

86 – 54 = □

54 + 32 = □

3.6 Do ourselves

1. Add the following

(1) $20 + 30 =$

(2) $700 + 300 =$

(3) $534 + 263 =$

(4) $318 + 571 =$

(5) $416 + 259 + 39 =$

(6) $21 + 301 + 5245 =$

(7) $8231 + 1053 =$

(8) $2508 + 369 + 5958 =$

(9) $98 + 1089 + 3607 + 2659 =$

(10) $4109 + 1823 + 309 + 4038 =$

2. Add the following

(1)
$$\begin{array}{r} 194 \\ +704 \\ \hline \end{array}$$

(2)
$$\begin{array}{r} 937 \\ +999 \\ \hline \end{array}$$

(3)
$$\begin{array}{r} 187 \\ +896 \\ \hline \end{array}$$

(4)
$$\begin{array}{r} 1501 \\ +6263 \\ \hline \end{array}$$

(5)
$$\begin{array}{r} 7429 \\ +1639 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 1108 \\ +8097 \\ \hline \end{array}$$

(7)
$$\begin{array}{r} 30 \\ 1501 \\ +6258 \\ \hline \end{array}$$

(8)
$$\begin{array}{r} 3603 \\ 395 \\ +5047 \\ \hline \end{array}$$

(9)
$$\begin{array}{r} 6171 \\ 1530 \\ +2048 \\ \hline \end{array}$$

(10)
$$\begin{array}{r} 1628 \\ 67 \\ 395 \\ +3043 \\ \hline \end{array}$$

(11)
$$\begin{array}{r} 4371 \\ 1692 \\ 2049 \\ +1903 \\ \hline \end{array}$$

(12)
$$\begin{array}{r} 1792 \\ 3409 \\ 2637 \\ +1851 \\ \hline \end{array}$$

3.Subtract the following

(1) 582– 371 =

(2) 149 –58 =

(3) 603– 285 =

(4) 413 –296 =

(5) 740– 492 =

(6) 3004 –349 =

(7) 5931– 2952 =

(8) 8243– 1358 =

(9) 6000 –5983 =

(10) 9320 –7541 =

4. Subtract the following

(1) 593 − 41

(2) 138 − 59

(3) 795 − 341

(4) 2175 − 209

(5) 1070 − 762

(6) 5000 − 471

(7) 7183 − 2692

(8) 4904 − 3182

(9) 8213 − 4893

(10) 1000 − 185

(11) 3020 − 2951

(12) 5103 − 2365

5. In Karimgonj school, there were 725 students. 130 new students were admitted. What is the number of students, now?

6. In a cricket game Sujon scored 120 runs, Sumon scored 85 runs and Sujoy scored 67 runs. How many runs they scored altogether?

7. Sum of two numbers is 8430. One of them is 5275. What is the other number?

8. Mr. Ajoy went to Bazar with Tk.4250. After marketing, he had Tk.890 left with him. How much did he spend?

9. Difference of two numbers is 930. The smaller number is 1555. What is the greater number?

10. Mahmuda Begum went to market with Tk.1500. she bought rice for Tk. 375, fish for Tk.530 and vegetables for Tk.350. How much money was left with her?

11. There were 950 Chicks in a poultry farm. 532 chicks were sold from them. 420 new chicks were brought in the farm. How many chicks were in the farm then?

12. Ruma has Tk. 825. Anu has Tk. 215 less than Ruma. Their Taka put together equals Topu's Taka. How many Taka does Topu have?

13. In a garden, there are 276 guava trees and 45 mango trees. How many trees are there in the garden in all?

14. The son is 18 years old and the mother is 52 years old. What will be their total age after 10 years?

15. Tk. 9500 is needed for annual sports competition. Tk.4500 as government contribution and Tk.2000 from school fund, are given. How many Taka more will have to be collected to conduct the competition?

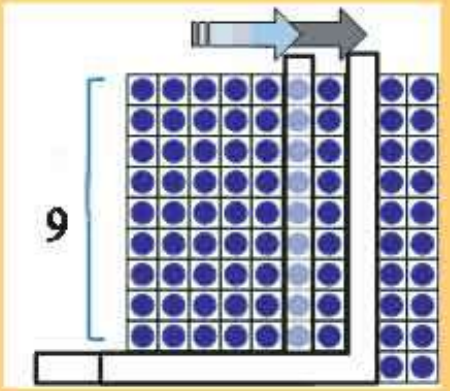
4. Multiplication

4.1 Multiplication up to 20

We learnt multiplication in grade two. Now we can review.

We learnt multiplication up to 10 times 10 in Grade2. Let us look at carefully again.

Let us revise about multiplication of 9.

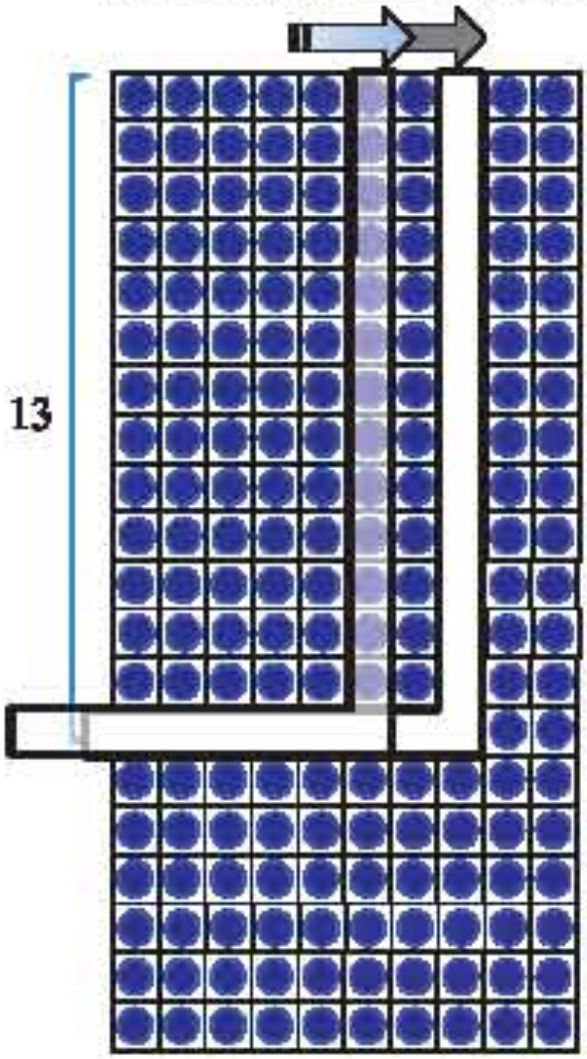


The Multiplication Table for 9

9 × 1	= 9
9 × 2	= 18
9 × 3	= 27
9 × 4	= 36
9 × 5	= 45
9 × 6	= 54
9 × 7	= 63
9 × 8	= 72
9 × 9	= 81
9 × 10	= 90

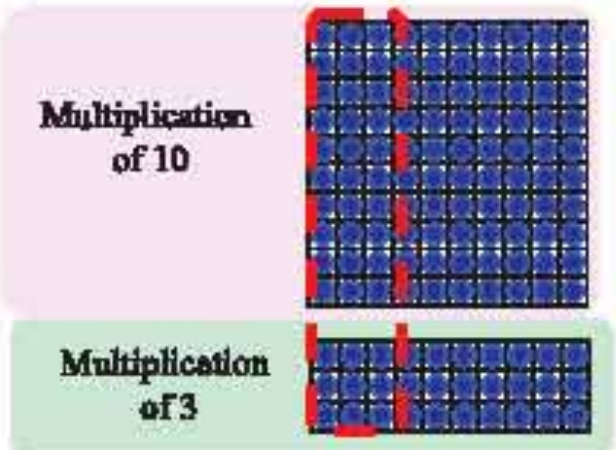
Let us make multiplication table of 13

How did we learn multiplication in grade two in that way we can solve multiplication of 13.



The Multiplication Table for 13

13 × 1 =	13
13 × 2 =	26
13 × 3 =	39
13 × 4 =	52
13 × 5 =	65
13 × 6 =	78
13 × 7 =	91
13 × 8 =	104
13 × 9 =	117
13 × 10 =	130



If we separate 13's multiplication into 10's and 3's multiplications, for example, 13 x 3 = 39, equals to addition of 10 x 3 = 30 and 3 x 3 = 9.

Fill in the blanks by applying the previous method and complete the following multiplication table.

Other number's multiplication also, we can seperate that number into 10's and the remaining number's multiplications. For example, 18 can be separated into 10 and 8.

Multiplication Table

×	1	2	3	4	5	6	7	8	9	10
11										
12										
13	13	26	39	52	65	78	91	104	117	130
14										
15										
16										
17										
18										
19										
20										

Multiplication Table

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100
11	11	22	33	44	55	66	77	88	99	110
12	12	24	36	48	60	72	84	96	108	120
13	13	26	39	52	65	78	91	104	117	130
14	14	28	42	56	70	84	98	112	126	140
15	15	30	45	60	75	90	105	120	135	150
16	16	32	48	64	80	96	112	128	144	160
17	17	34	51	68	85	102	119	136	153	170
18	18	36	54	72	90	108	126	144	162	180
19	19	38	57	76	95	114	133	152	171	190
20	20	40	60	80	100	120	140	160	180	200

4.2 Multiplication of two digit number by one digit number

One pineapple costs 20 taka. If you buy 4, how much will it cost?

Mathematical sentence: $20 \times 4 = ?$

$2 \times 4 = 8$

$20 \times 4 = 80$

20 is the number that is made up of 2 tens.
The answer is 8 tens.
Then the cost is Tk. 80

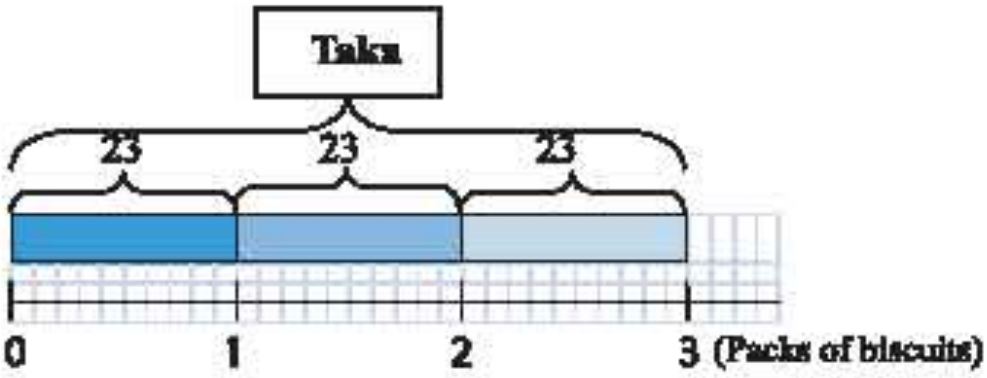
1. How to calculate, $30 \times 5 =$

10	10	10	10	10
10	10	10	10	10
10	10	10	10	10

$3 \times 5 =$ ☐

$30 \times 5 =$ ☐

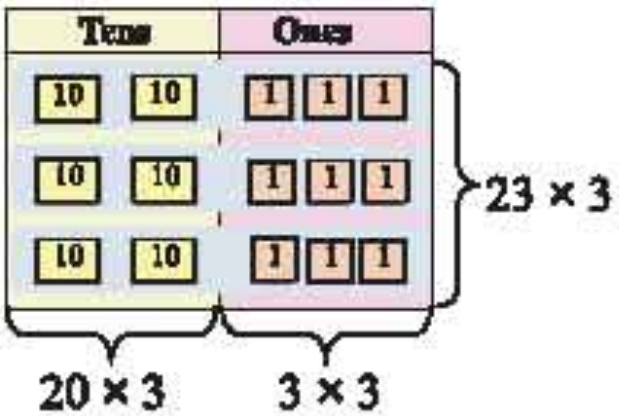
Reza wants to buy three packs of biscuits and it costs Tk 23 for one. How much does he need to pay for it?



Unit cost of 1 pack	×	Number of packs.	=	Total price
Multiplicand	×	Multiplier	=	Product

Let us write mathematical sentence

Now, let us think about how to calculate using the following diagram.



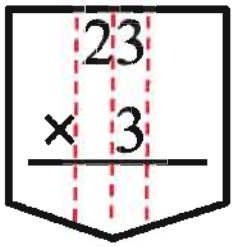
$23 \times 3 = 69$

$23 \times 3 \begin{cases} 20 \times 3 = 60 \\ 3 \times 3 = 9 \end{cases}$

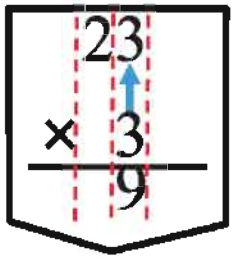
Total 69

Taka: _____

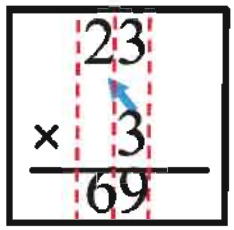
How can we calculate by using multiplication table?



Line up the numbers vertically in each place



Calculate 3 x 3 = 9 and write 9 in the ones place.



Calculate 2 x 3 = 6 and write 6 in the tens place.

$$\begin{array}{r} 23 \\ \times\ 3 \\ \hline 9 \quad \ldots 3 \times 3 \\ 60 \quad \ldots 20 \times 3 \\ \hline 69 \end{array}$$

2. Let us multiply

(1) $30 \times 3 =$

(2) $20 \times 4 =$

(3) $34 \times 2 =$

(4) $24 \times 2 =$

(5) $\begin{array}{r} 10 \\ \times\ 8 \\ \hline \end{array}$

(6) $\begin{array}{r} 30 \\ \times\ 2 \\ \hline \end{array}$

(7) $\begin{array}{r} 20 \\ \times\ 3 \\ \hline \end{array}$

(8) $\begin{array}{r} 12 \\ \times\ 4 \\ \hline \end{array}$

(9) $\begin{array}{r} 21 \\ \times\ 4 \\ \hline \end{array}$

(10) $\begin{array}{r} 32 \\ \times\ 3 \\ \hline \end{array}$

Let us think how to calculate 17×3.

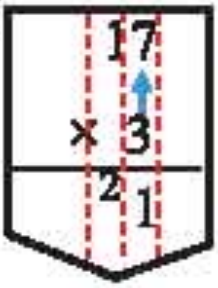
First we can divide 17 into two parts - 10 and 7.

$10 \times 3 = \square$

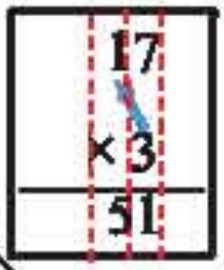
$7 \times 3 = \square$

$17 \times 3 = \square$

Let us think how to calculate 17 × 3 = ?



Calculate 7 x 3 = 21 and write 1 in the ones place and small 2 in tens place like the figure left side.



Calculate 1 x 3 = 3 and add 2 (3 +2 =5). Then write 5 in the tens place.

$$\begin{array}{r} 17 \\ \times\ 3 \\ \hline 21 \\ 30 \\ \hline 51 \end{array} \quad \begin{array}{l} \\ \\ \\ \ldots 7 \times 3 \\ \ldots 10 \times 3 \\ \\ \end{array}$$

3. Let us multiply

(1) $18 \times 5 =$

(2) $36 \times 3 =$

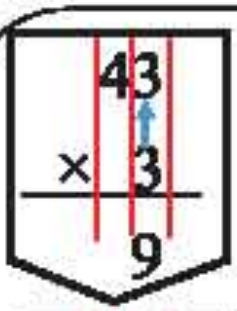
(3) $49 \times 2 =$

(4) $25 \times 4 =$

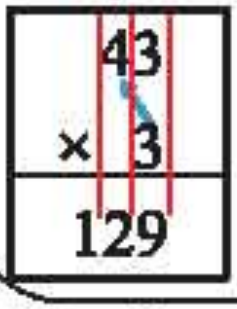
(5) $\begin{array}{r} 24 \\ \times\ 4 \\ \hline \end{array}$ (6) $\begin{array}{r} 12 \\ \times\ 8 \\ \hline \end{array}$ (7) $\begin{array}{r} 48 \\ \times\ 2 \\ \hline \end{array}$

Let us calculate 43 x 3 and 67 x 3

(1) 43 × 3 =



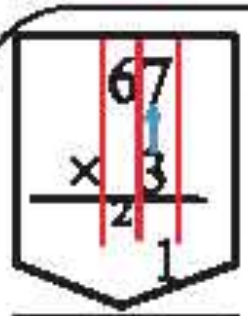
Calculate 3 x 3 = 9 and write 9 in the ones place.



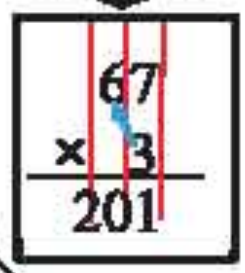
Calculate 4 x 3 = 12 and write 2 in the tens place and write 1 in the hundreds place.

```
  43
 ×3
 ---
   9 ...3 × 3
1 20 ...40× 3
---
1 29
```

(2) 67 × 3 =



Calculate 7 x 3 = 21 and write 1 in the ones place and write small 2 in the tens place.



Calculate 6 x 3 = 18 and add 2 (18 + 2 =20). Then write 0 in the tens place and write 2 in the hundreds place.

```
  67
 ×3
 ---
  21 ...7 × 3
1 80 ...60 × 3
---
2 01
```

4. Let us multiply

(1) 48 × 3 =

(2) 62 × 4 =

(3) 37 × 5 =

(4) 75 × 8 =

(5) 86 × 6 =

4.3 Multiplication of Three digit number by one digit number

Let us think how to calculate 231 x 3

Hundreds	Tens	Ones
100 100	10 10 10	1
100 100	10 10 10	1
100 100	10 10 10	1

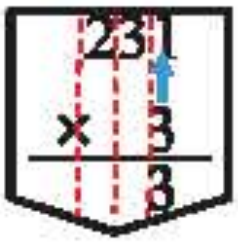
231×3

200 × 3 | 30 × 3 | 1 × 3

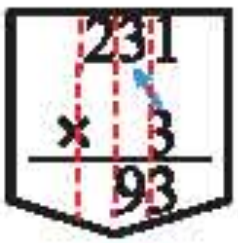
231×3

200 × 3 = 600
30 × 3 = 90
1 × 3 = 3

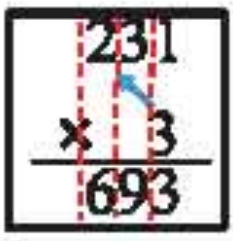
Total 693



Calculate 1 x 3 = 3 and write 3 in the ones place



Calculate 3 x 3 = 9 and write9 in the tens place.

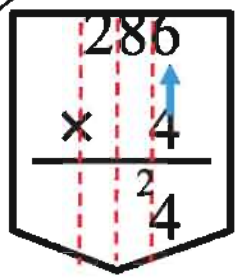


Calculate 2 x 3 = 6 and write 6 in the hundreds place.

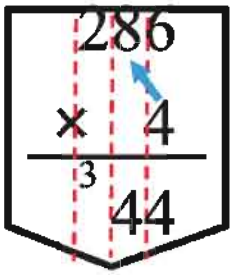
```
 2 3 1
 ×   3
-------
     3   ...1 × 3
   9 0   ...30 × 3
 6 0 0   ...200 × 3
-------
 6 9 3
```

Let us think how to calculate 286 x 4

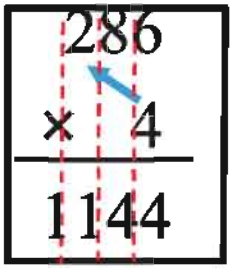
$286 \times 4 =$ ☐



Calculate 6 x 4 = 24 and write 4 in the ones place and small 2 in tens place.



Calculate 8 x 4 = 32 and add 2 (32 + 2 = 34). Then write 4 in the tens place and small 3 in the hundreds place.



Calculate 2 x 4 = 8 and add 3 (8 + 3 = 11). Then write 1 in the hundreds place and 1 in thousands place.

```
  2 8 6
×   4
-------
  2 4   ...6 × 4
  3 2 0 ...80 × 4
  8 0 0 ...200 × 4
-------
1 1 4 4
```

Let us multiply

(1) $174 \times 6 =$

(2) $259 \times 3 =$

(3) $683 \times 4 =$

(4) $485 \times 8 =$

(5)
```
  2 7 0
×   5
-------
```

(6)
```
  8 3 6
×   4
-------
```

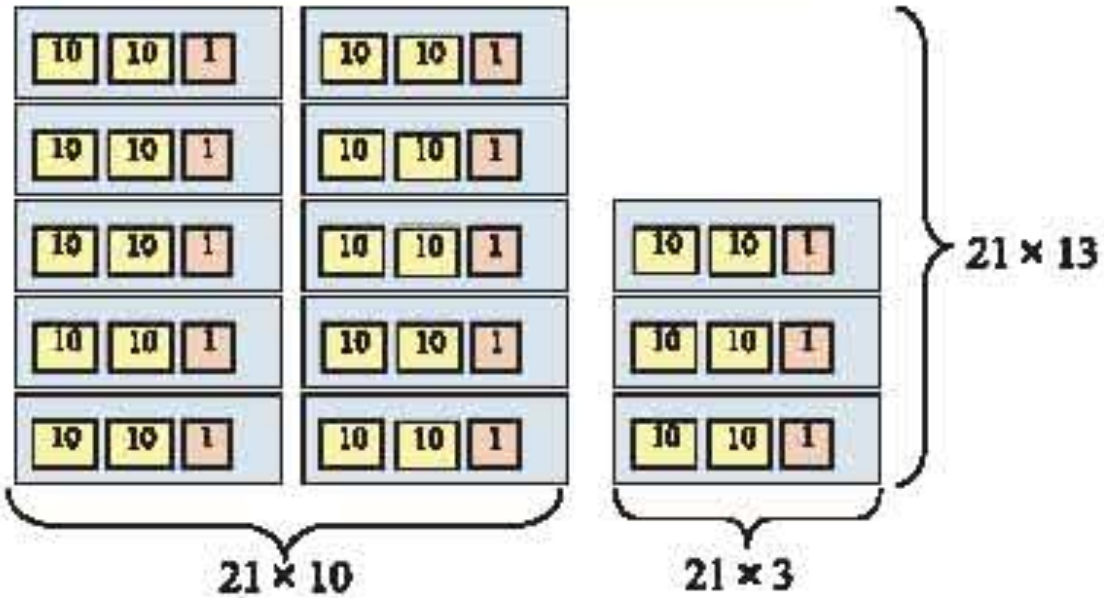
(7)
```
  1 8 9
×   9
-------
```

4.4 Multiplication of two or three digit number by two digit number

Meena is buying 13 pencils. If each pencil costs Tk.21, how much will it cost in total?

Write calculation in Math sentence.

How can we calculate? Let us think it.



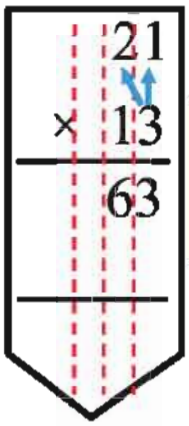
$$21 \times 13 \begin{cases} 21 \times 10 = 210 \\ 21 \times 3 = 63 \end{cases}$$

$$\text{Total} = 273$$

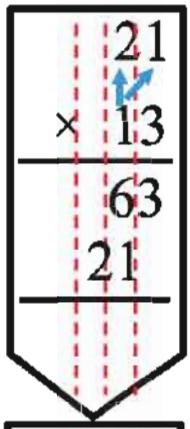
$21 \times 13 = 273$

Total Tk.273

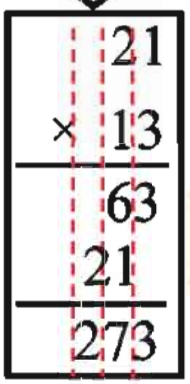
Then, let us think how to calculate by using numbers.



Calculate 21 x 3 = 63 and write 3 in the ones place and 6 in tens place.



Calculate 21 x 1 = 21 and write 1 in the tens place and 2 in the hundreds place.



Add

$$\begin{array}{r} 21 \\ \times\ 13 \\ \hline 63 \quad \ldots 21 \times 3 \\ 210 \quad \ldots 21 \times 10 \\ \hline 273 \end{array}$$

Let us think why 21 shifted like figure in the left. Not start from ones place.

1. Multiply

(1) $12 \times 24 =$ (2) $50 \times 11 =$ (3) $31 \times 21 =$

(4) $\begin{array}{r} 32 \\ \times\ 12 \\ \hline \end{array}$ (5) $\begin{array}{r} 30 \\ \times\ 23 \\ \hline \end{array}$ (6) $\begin{array}{r} 41 \\ \times\ 23 \\ \hline \end{array}$

Explain how to calculate the following calculations.

(1)
$$\begin{array}{r} 43 \\ \times\ 35 \\ \hline 215 \\ 1290 \\ \hline 1505 \end{array}$$

(2)
$$\begin{array}{r} 36 \\ \times\ 53 \\ \hline 108 \\ 1800 \\ \hline 1908 \end{array}$$

(3)
$$\begin{array}{r} 64 \\ \times\ 58 \\ \hline 512 \\ 3200 \\ \hline 3712 \end{array}$$

To calculate it has been carried

We have learnt calculation with carrying.

Multiply

2. Let us Multiply

(1) 50 × 20 =

(2) 18 × 71 =

(3) 63 × 31 =

(4) 39 × 40 =

(5) 74 × 38 =

(6) 24 × 42 =

(7) 79 × 53 =

(8) 84 × 29 =

(9) 93 × 89 =

(10)
$$\begin{array}{r} 20 \\ \times 80 \\ \hline \end{array}$$

(11)
$$\begin{array}{r} 17 \\ \times 68 \\ \hline \end{array}$$

(12)
$$\begin{array}{r} 91 \\ \times 25 \\ \hline \end{array}$$

(13)
$$\begin{array}{r} 57 \\ \times 19 \\ \hline \end{array}$$

(14)
$$\begin{array}{r} 47 \\ \times 26 \\ \hline \end{array}$$

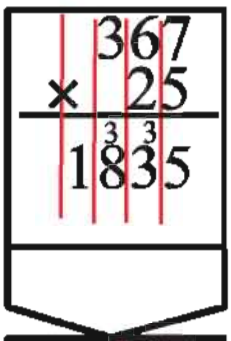
(15)
$$\begin{array}{r} 37 \\ \times 73 \\ \hline \end{array}$$

(16)
$$\begin{array}{r} 98 \\ \times 62 \\ \hline \end{array}$$

(17)
$$\begin{array}{r} 47 \\ \times 89 \\ \hline \end{array}$$

(18)
$$\begin{array}{r} 99 \\ \times 48 \\ \hline \end{array}$$

Let us think how to calculate 367 x 25

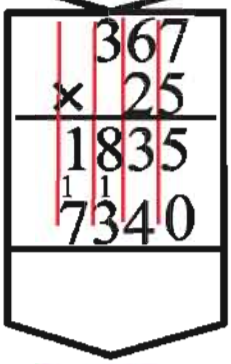


367 x 5

7 x 5 =35: 5 in the ones place and carried 3 in tens place.

6 x 5 = 30 and (30 + 3 = 33): 3 in the tens place and carried 3 in the hundreds place.

3 x 5 = 15 and (15 + 3 = 18): 8 in the hundreds place and 1 in the thousands place.

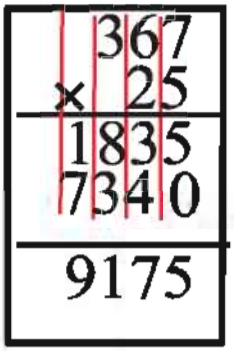


367 x 2

7 x 2 = 14: 4 in the tens place and 1 in hundreds place

6 x 2 = 12 and (12 + 1 = 13): 3 in hundreds place and 1 in the hundreds place.

3 x 2 = 6 and (6 + 1 = 7): 7 in the thousands place.



Add

3. Let us Multiply

(1) 127 × 11 =

(2) 508 × 19 =

(3) 394 × 26 =

(4) 195 × 34 =

(5)
$$\begin{array}{r} 301 \\ \times\ 21 \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 298 \\ \times\ 27 \\ \hline \end{array}$$

(7)
$$\begin{array}{r} 157 \\ \times\ 52 \\ \hline \end{array}$$

4.5 Do ourselves

1. Multiply followings

(1) $15 \times 5 =$

(2) $18 \times 9 =$

(3) $53 \times 8 =$

(4) $75 \times 6 =$

(5) $21 \times 31 =$

(6) $48 \times 93 =$

(7) $121 \times 31 =$

(8) $495 \times 14 =$

(9) $284 \times 28 =$

(10) $269 \times 35 =$

2. Multiply followings

(1) $\begin{array}{r} 14 \\ \times\ 2 \\ \hline \end{array}$

(2) $\begin{array}{r} 56 \\ \times\ 4 \\ \hline \end{array}$

(3) $\begin{array}{r} 90 \\ \times\ 5 \\ \hline \end{array}$

(4) $\begin{array}{r} 36 \\ \times 48 \\ \hline \end{array}$

(5) $\begin{array}{r} 28 \\ \times 73 \\ \hline \end{array}$

(6) $\begin{array}{r} 89 \\ \times 64 \\ \hline \end{array}$

(7) $\begin{array}{r} 121 \\ \times\ 23 \\ \hline \end{array}$

(8) $\begin{array}{r} 305 \\ \times\ 7 \\ \hline \end{array}$

(9) $\begin{array}{r} 486 \\ \times\ 9 \\ \hline \end{array}$

(10) $\begin{array}{r} 210 \\ \times\ 20 \\ \hline \end{array}$

(11) $\begin{array}{r} 373 \\ \times\ 28 \\ \hline \end{array}$

(12) $\begin{array}{r} 298 \\ \times\ 35 \\ \hline \end{array}$

3. 1 hali is equal to 4 items. How many items will be in 5 hali?

4. If there are 6 flowers in a bundle, then how many flowers will be in 8 bundles?

5. Toma reads books 4 hours daily. How many hours does she read in a week?

6. There are 24 sheets of paper in a quire. How many sheets will be in 12 quire?

7. There are 15 rows of betel-nut trees in Ranu's garden and there are 24 trees in each row. How many trees are there in the garden?

8. Tondra Chakma drives at the rate of 45 km per hour. How many km will she go in 8 hours at the same speed?

9. 1 taka is equal to 100 paisa. How many paisa will be in Tk.10?

10. There are 130 pages in a book. How many pages are there in 28 such books?

11. Nipu has 14 times of what Rimi has. If Rimi has Tk. 225, then how many taka does Nipu have?

12. A piece of hilsha fish is Tk.350. what is the price of 20 such hilsha fishes?

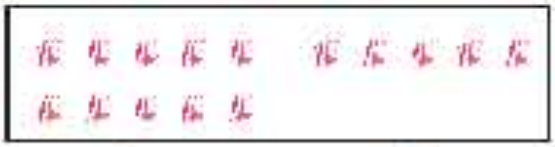
5. Division

5.1 Revision of Grade2

Let us make word problems which can solve equation from 15÷3=?

Meena has 15 apples and distributes same to her three friends equally. How many apples will be distributed to one of her friend?

Reza has 15 apples and distribute them to his friends three apples each. How many of his friends can get apples?



One each			
Two			
Three			
Four			
Five			

5 × 3 = 15

Five for one friend

15 ÷ 3 = 5

3 × 5 = 15

I can distribute to five friends.

1. Make a word question which can be solved by $21 \div 7 = ?$

2. Solve the following divisions. Before you solve, also answer which number's multiplication table will be used for the question. Example : $42 \div 6 = 7$;
Multiplication table of 6

(1) $14 \div 2 =$ (2) $40 \div 5 =$

(3) $42 \div 7 =$ (4) $18 \div 3 =$

(5) $36 \div 6 =$ (6) $63 \div 9 =$

3. They are going to divide biscuits in the box three ways among three.

(1) If there are six biscuits on the plate, how many will each one get?

( ) ÷ 3 = ( )

(2) If there are three biscuits on the plate, how many will each one get?

( ) ÷ 3 = ( )

(3) If there are zero biscuits on the plate, how many will each one get?

0 ÷ 3 = 0

4. Solve the following calculations

(1) $0 \div 2 =$ (2) $18 \div 1 =$ (3) $0 \div 9 =$

5.2 Two digit number divided by one digit number

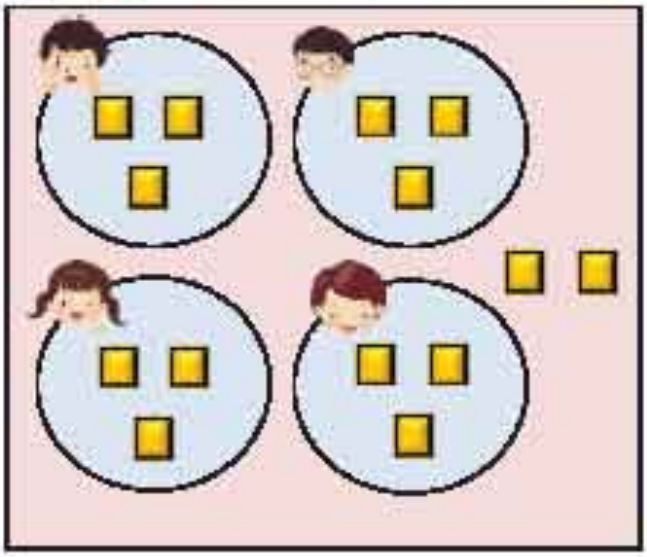
I have 14 oranges and want to distribute them equally among 4 of my friends. How many will each one receive?

Write in math sentence: ____

Let us think how to find the answer.

I use blocks to find the answer.

I use multiplication table



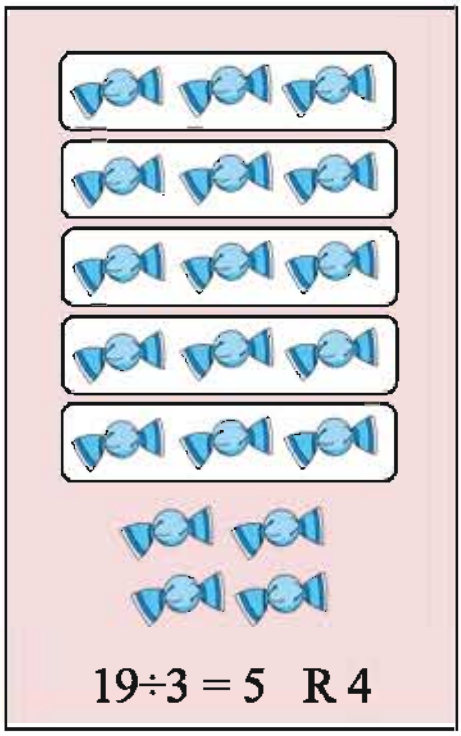
When distributed 2 oranges,
$4 \times 2 = 8$, 6 left
When distributed 3 oranges,
$4 \times 3 = 12$, 2 left
When distributed 4 oranges,
$4 \times 4 = 16$, 2 short

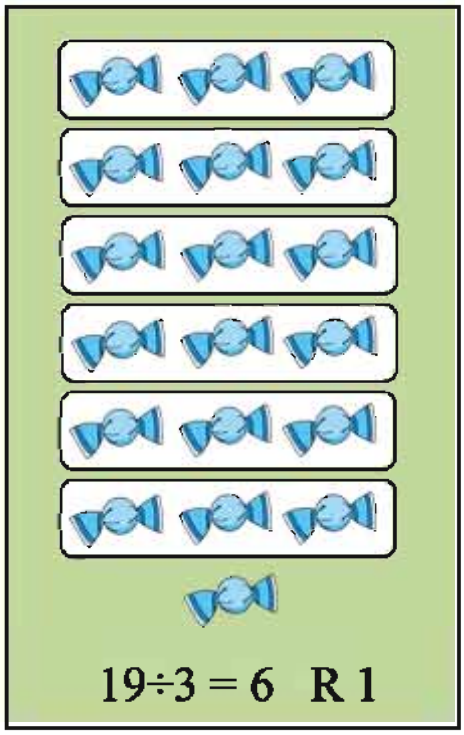
If I distribute 14 oranges to 4 of my friends, I can give them 3 oranges each and 2 oranges will be left.

Math sentence is; $14 \div 4 = 3$ R 2

Each friend can receive
3 oranges and 2 oranges are left.

There are 19 chocolates. If you distribute 3 chocolates to each of your friends, how many friends can get chocolates?





Reza, your chocolate still can be distributed!

The remainder of a division is smaller than the divisor

Remainder < Divisor

1. Let us calculate

(1) 14 ÷ 5 =

(2) 38 ÷ 4 =

(3) 57 ÷ 9 =

(4) 17 ÷ 3 =

There are 59 pencils. You distribute 7 pencils to each child. How many children can get pencils? How many pencils are left?

59 ÷ 7 = ☐ Remainder ☐

Let us think about the method of divison

Method of division
Divisor) Dividend(Quotient
Remainder

7) 59 (

1. Write dividend (which is to be divided) in the middle and divisor (by which is to be divided) on the left.

7) 59 (

2. Let us take times table of 7. 7x7=49, 7x8= 56, 7x9= 63. Here, 63 is greater than 59. Therefore, consider 7x8=56.

7) 59 (8
56

3. Write 56 that you found from 7x8=56 and 8 as quotient in the right as shown on the left.

7) 59 (8
56
3

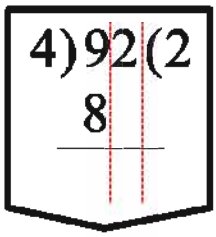
4. Subtract 56 from 59. The remainder is 3.

8 children will get the pencil and the remainder is 3

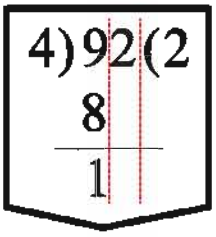
2. Let us calculate.

(1) 2) 13((2) 6) 45((3) 4) 27((4) 8) 60(

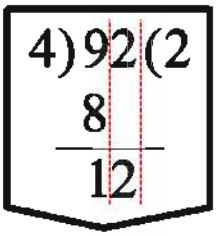
There are 92 pencils. When you divide them equally among 4 of your friends, how many pencils will each friend receive?



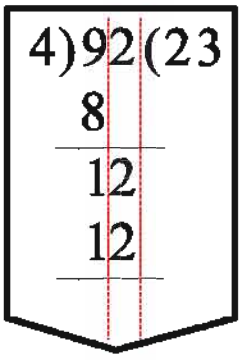
Divide 9 by 4 and write 2 like the figure in the left. $9 \div 4 = 2$ R 1
And then,multiply 4 by 2 and write 8.
$4 \times 2 = 8$



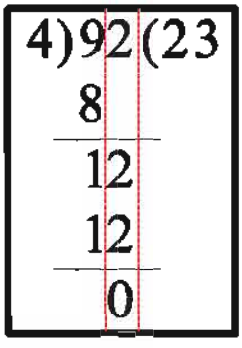
Subtract 8 from 9 and write 1 (remainder) under the 8.
$9 - 8 = 1$



Bring down 2 from the ones place.



Divide 12 by 4 and write 3 in the right side of the 2.
$12 \div 4 = 3$
And then, multiply 4 by 3 and write 12.
$4 \times 3 = 12$



Subtract 12 from 12.
$12 - 12 = 0$
Then, write 0 in the bottom part of the ones place.

Every friend will get 23 pencils each.

Explain how to calculate the following divisions.

(1)
```
3)56(18
 3
 --
 26
 24
 --
  2
```

(2)
```
7)43(6
 42
 --
  1
```

(3)
```
4)89(22
 8
 --
  9
  8
 --
  1
```

3. Let us calculate

(1) 40 ÷ 2 =

(2) 84 ÷ 7 =

(3) 51 ÷ 3 =

(4) 96 ÷ 4 =

(5) 69 ÷ 4 =

(6) 85 ÷ 6 =

(7) 2)60(

(8) 7)84(

9) 3)57(

(10) 2)75(

(11) 6)99(

(12) 8)97(

(13) 3)76(

(14) 5)68(

(15) 4)94(

4.

1. The price of 5 eggs is Tk.75. what is the price of one egg?

2. In the class, there are 41 students. 3 students can sit in each bench. How many benches will be needed for them?

3. There are 83 pencils and 7 students. How many pencils will each student get if they share the pencils equally?

5.3 Three digit number divide by one digit number

There are 649 sheets of paper. 5 students will share equally. How many sheets of paper will each student get?

```
5)649(1
 5
 1
```

$6 \div 5 = 1$ R 1
Write 1 in the quotient and 1 in the hundreds place like the figure in the left side.

```
5)649(12
 5
 14
 10
  4
```

Bring down 4 in the tens place (next to the 1) and calculate
$14 \div 5 = 2$ R 4
Write 2 in the quotient next to 1 and 4 in the tens place like the figure in the left side.

```
5)649(129
 5
 14
 10
  49
  45
   4
```

Bring down 9 in the ones place (next to the 4) and calculate
$49 \div 5 = 9$ R 4
Write 9 in the quotient next to 2 and 4 in the ones place like the figure in the left side.

Each student will get 129 sheets of paper and 4 sheets will remain .

1. Let us calculate.

(1) 3)715((2) 8)427((3) 7)819(

(4) 3)962((5) 4)851((6) 4)683(

5.4 Do ourselves.

1. Let us divide

(1) $42 \div 7 =$ (2) $52 \div 2 =$

(3) $63 \div 8 =$ (4) $85 \div 4 =$

(5) $501 \div 7 =$ (6) $835 \div 9 =$

(7) 4)80((8) 9)72(9) 6)84(

(10) 5)61((11) 3)59((12) 7)92(

(13) 5)705((14) 6)264((15) 7)390(

(16) 3)638((17) 8)489((18) 6)931(

2. In a class, there are 45 students. 5 students can sit in each bench. How many benches will be needed for them to sit?
3. 48 guavas were distributed equally among 6 persons. How many guavas did each person get?
4. The price of each banana is Tk.6. How many such bananas can be bought for Tk.90?
5. Reza has Tk.532. If an egg costs Tk.7, how many can he buy and how much money remains?
6. One year equals 365 days. How many weeks and days does 1 year have?

6. Problems related to addition, subtraction, multiplication and division

Last month, Raju had Tk.953 and went to shop 4 times. Each time he bought 14 eggs and one egg cost Tk.6. How much Raju's money remain at the end of last month?

It is very complecated! I have no idea how to solve this question.

First, we have to know how much he spent each time.

I understand! After we get how much he spent each time, we can get how much he spent in the last month by using multiplication.

1. How much he spent each time.

14 (eggs) × 6 (Taka) = 84 (Taka)

He spent Tk.84 in a day.

2. Last month he bought egg four times.
How much he spent in the last month?

84 (Taka) × 4 (times) = 336 (Taka)

He spent Tk.336 in the last month.

3. How much money remaining ?

953 – 336 = 617

Tk.617 remaining

1. Duke gets a scholarship of Tk.90 per month. He gave Peter Tk.80 from what he got in 6 months. How much money was then left with Duke?

Sunni has 40 colour pencils. She divided the pencils in 5 equal groups and gave Urmi 2 groups. How many pencils did Urmi get?

1. 40 pencils divided in to 5 equal groups

$40 \div 5 = 8$

8 pencils in one group

2. How many pencils Urmi got ?

8 (pencils) × 2 (groups) = 16

Answer: Urmi got 16 pencils

2. There are 45 lozenges in a packet. From these 10 lozenges are kept aside and the remaining lozenges are distributed equally among 5 children. How many lozenges does each get?

Subtraction first and division next.

3. There are 30 mangoes in a basket. There are 24 mangoes in another basket. The mangoes of the two baskets are put together and equally distributed among 6 persons. How many mangoes does each person get?

Addition first and division next.

4. Meena's weight is 22kg. Her father's weight is 3 times more than her weight. Her brother's weight is half of her father's weight. What is her brother's weight?

Multiplication first and division next.

6.1 Do ourselves

1. Reza is inviting 6 friends to his house. He has 85 boroi. How many boroi will each friend get? Is there any remaining boroi?

2. The price of a pencil is Tk.20 and that of an exercise book is Tk.25. How many taka will be needed to buy 5 pencils and 6 exercise books?

3. 3 parts out of 5 parts of a 60-meter long ribbon are given to Ruma. How many meters of the ribbon does Ruma get?

4. There are 55 books in each almirah. How many books are there in 12 such almirahs?

5. In a class, there are 44 students. How many benches will be needed for 4 students to sit in each bench?

6. There are 32 lozenges in a packet. How many lozenges are in 8 such packets?

7. The price of a book and 3 pencils are Tk.95 together. The price of a pencil is Tk.20. What is the price of a book?

8. There were 83 mangoes. Reza took 6 mangoes from them and distributed the rest equally to his 7 friends. How many did each of his friends get?

9. Rahim's weight is 25 kg. Akash's weight is 3kg more than Rahim's weight. Ali's weight is 34 kg. What is the difference between Akash and Ali's weight?

10. It is possible to keep 42 books in a shelf. 2 such shelves are filled with books and there are 8 more books. How many books are there altogether?

11. There are 10 benches in a class. 5 students can be seated in each of the 6 benches. 4 students can be seated in each of the remaining 4 benches. How many students can be seated altogether in 10 benches?

12. Sukumar gets Tk.90 per month as scholarship. He gave Rina Tk.95 from his 12 months scholarship. How much money remains with him?

13. There are 74 *litchies* in a basket. There are 70 *litchies* in another basket. The *litchies* of the two baskets are put together and distributed equally among 8 persons. How many *litchies* does each person get?

14. Tahmina bought a packet of 50 balloons. From them she kept 8 balloons for her. Remaining balloons were given equally among 8 friends. How many balloons does Tahmina's each friend get?

15. Each of 30 persons gave Tk.80 as subscription for flood victims. The total money received was distributed equally among 10 flood victims. How many taka did each get?

16. The mother's present age is 3 times that of the son. At present moth er's age is 45 years. What is son's present age?

17. Shuroma sold 6 dozen eggs at the rate of Tk.90 per dozen. From what she got, she spent Tk.85 in the market. The remaining amount she deposited in the bank. What amount did she deposit in the bank?

18. The father's present age is 4 times that of the girl. 4 years ago, the girl's age was 6 years. What is the father's present age?

7. Bangladeshi Coins and Notes

Bangladeshi Coins

1 paisa	5 paisa	10 paisa	25 paisa
50 paisa	1 taka	2 taka	5 taka

Bangladeshi Notes

1 taka

2 taka

5 taka

10 taka

20 taka

50 taka

100 taka

500 taka

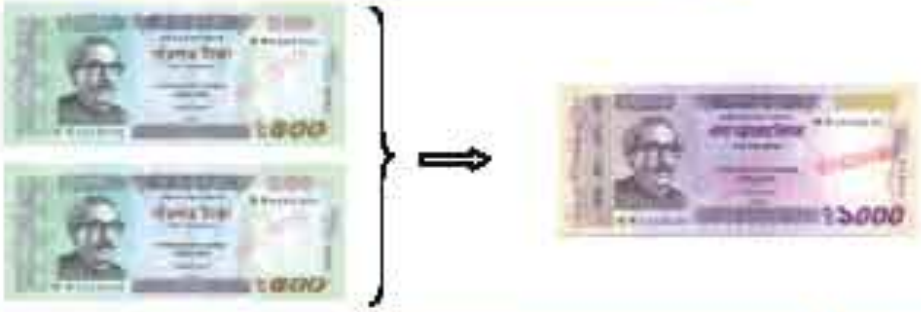
1000 taka

What is the relationship between paisa and taka?

Let us look at their relationship.

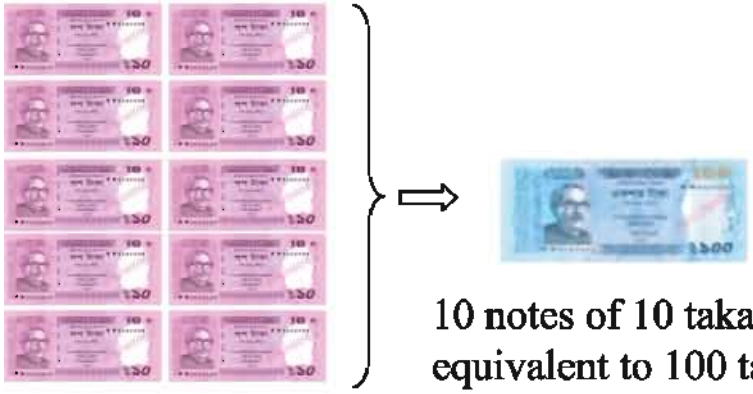
50 paisa + 50 paisa = 1 taka

100 paisa is equivalent to 1 taka!
Then it is very easy to calculate.
What about the following case?



What is the amount of the money, if there are 10 notes of 10 taka.

This calculation is same as what we learnt in Number!



10 notes of 10 taka is equivalent to 100 taka.

1. Let us solve.

(1) 20 notes of 10 taka equals to ☐ taka.

(2) 5 notes of 20 taka equals to ☐ taka.

(3) 50 notes of 20 taka equals to ☐ taka.

(4) 10 notes of 50 taka equals to ☐ taka.

(5) 100 notes of 1 taka equals to ☐ taka.

(6) 10 notes of 100 taka equals to ☐ taka.

(7) 100 notes of 5 taka equals to ☐ taka.

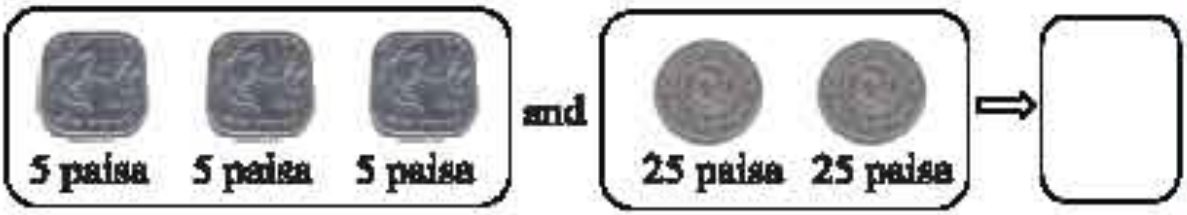
(8) ☐ notes of 20 taka equals to 100 taka.

(9) ☐ notes of 100 taka equals to 500 taka.

(10) ☐ notes of 2 taka equals to 100 taka

(11) ☐ notes of 1000 taka equals to 10000 taka

Let us think about the amount of the following coins.



We can calculate same as addition.

$$\underbrace{5+5+5}_{15}+\underbrace{25+25}_{50}=65$$

Total : 65 Paisa

$$10+25+25+50=110$$

100 paisa = 1 taka
What is answer?

Total : 1 Taka and 10 Paisa

2. Let us calculate

(1) 5 paisa + 5 paisa + 5 paisa + 25 paisa + 2 taka =

(2) 10 paisa + 1 paisa + 50 paisa + 2 taka + 10 taka =

(3) 25 paisa + 50 paisa + 50 paisa + 10 taka + 50 taka =

3. Circle the notes and coins to make the amount of money in the box

24 Taka 25 paisa

340 Taka 55 paisa

Example

2620 Taka 75 paisa

Let us calculate: 125 taka 58 paisa + 57 taka 74 paisa

	125	taka	58	paisa
+	57	taka	74	paisa
	182	taka	132	paisa

132 paisa =
1 taka and 32 paisa
So we have to add 1 taka to 182 taka.

Total : 183 taka and 32 Paisa

4. Let us calculate

(1) 25 taka 64 paisa + 37 taka 28 paisa

(2) 74 taka 49 paisa + 36 taka 95 paisa

(3) 387 taka 81 paisa + 2502 taka 74 paisa

Meena has 250 taka 25 paisa. If she will buy a glass costing 120 taka 75 paisa, how much money will be left?

	250	taka	25	paisa
–	120	taka	75	paisa
	.....	taka	.....	paisa

This case, we cannot subtract 75 from 25. How can we calculate?

Same as a subtraction, we bring 1 taka to paisa. As we know, 1 taka is equivalent to 100 paisa.

Paisa

If we change 1 taka to paisa, calculation will be like the following;

125 – 75 = 50

Taka

1 taka changed to paisa. 250 – 1 = 249

Calculation will become the following;

249 – 120 = 129

Total : 129 taka and 50 paisa

5. Let us calculate

(1) 85 taka 60 paisa – 32 taka 20 paisa =

(2) 380 taka 90 paisa – 210 taka 45 paisa =

(3) 850 taka 55 paisa – 270 taka 40 paisa =

(4) 401 taka 15 paisa – 97 taka 80 paisa =

(5) 70 taka – 32 taka 50 paisa =

7.1 Do our selves

1. How many taka and paisa are in the box ?

=

=

2. Calculate the followings;

(1) 30 taka 10 paisa + 40 taka 80 paisa =

(2) 47 taka 70 paisa – 29taka 75 paisa =

(3)

	69	taka	25	paisa
+	28	taka	80	paisa
		taka		paisa

(4)

	45	taka	20	paisa
+	58	taka	95	paisa
		taka		paisa

(5)

	500	taka	50	paisa
–	395	taka	75	paisa
		taka		paisa

(6)

	300	taka	10	paisa
–	3	taka	55	paisa
		taka		paisa

3. Sujan had 70 taka 50 paisa. His mother gave him 95 taka to buy fish. How much amount did Sujan have?

4. Rima bought a book with 85 taka 75paisa. She gave Tk.100 to the shopkeeper. How much money did the shopkeeper return?

5. The price of two exercise books is Tk.60 and that of a pen is 45 taka 60 paisa. Bijoy gives the shopkeeper a note of Tk.500 for these items. How much will the shopkeeper return to Bijoy?

6. Belal bought rice for 80 taka 75 paisa and vegetable for 35 taka 50 paisa. How much did he spend in total?

7. Mitu had 115 taka 50 paisa. Her father gave her 75 taka 25 paisa. How much money did she have?

8. Ria went to shop with 100 taka. She bought a book with 69 taka 65 paisa. How much money was left with her?

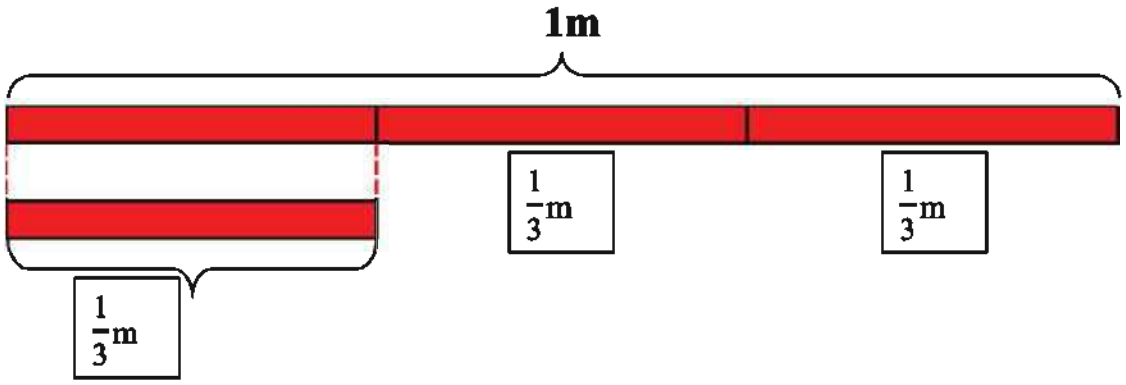
9. Ratan bought a packet of *chanachur* with 35 taka 75 paisa. He gave the shopkeeper a 50 taka note. How much money did the shopkeeper return to Ratan?

8. Fractions

8.1 Fractions

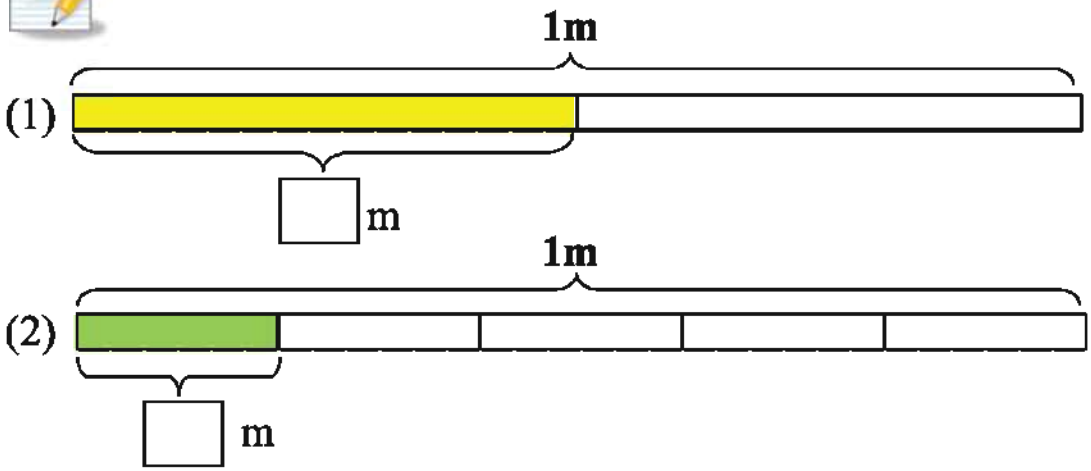
How can we express fractional parts?

There is 1 metre long string and it is divided into 3 equal parts. How can we express these lengths in metre?



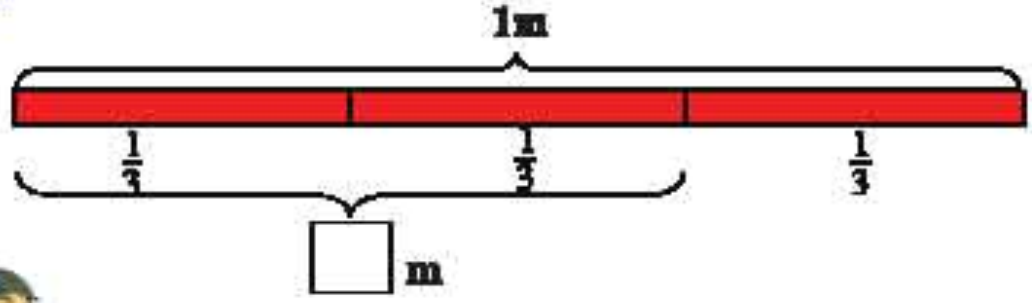
This part is called one third of 1m. It is written $\frac{1}{3}$ m

1. How long are the coloured parts?



2. Colour a part expressing $\frac{1}{4}$ m

How can we express 2 pieces out of 3 equal pieces of 1m?



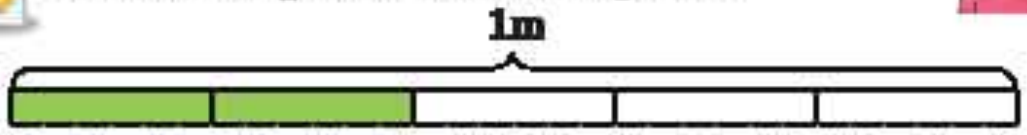
There are two $\frac{1}{3}$ m. So...

Two pieces out of 3 equal pieces of 1m is called two thirds of 1m. It is written as $\frac{2}{3}$ m.

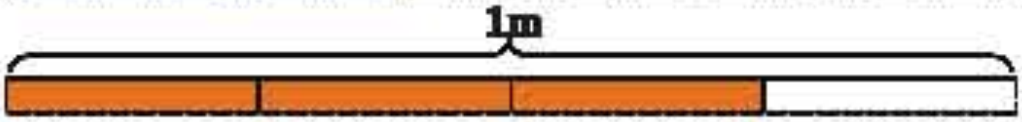
Then, $\frac{3}{3}$ is equivalent to 1m!

3. How long are the coloured parts?

(1)

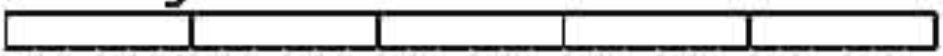


(2)



4. Colour the following parts :

(1) Colour $\frac{3}{5}$ part



(2) Colour $\frac{5}{8}$ part

Numbers like $\frac{1}{3}$ and $\frac{2}{5}$ are called fractions.
3 and 5 are called denominators.
1 and 2 are called numerators.

Fraction

Numerator 1
Denominator 4

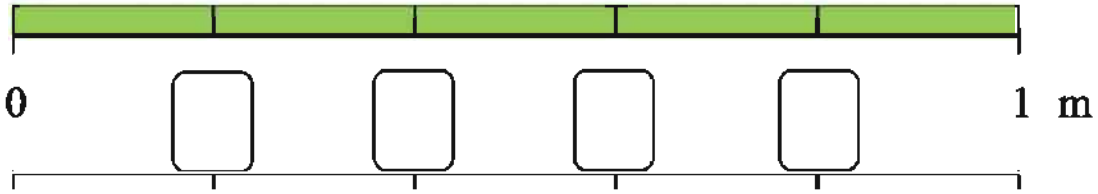
5. Indicate if a number is numerator then surround with △, if a number is denominator, then surround with ◯.

Example: $\frac{1}{3}$

(1) $\frac{4}{5}$ (2) $\frac{1}{7}$ (3) $\frac{5}{8}$ (4) $\frac{7}{9}$

6. Write a fraction that has 9 as the denominator and 5 as the numerator.

7. Solve the questions related to the following diagram.

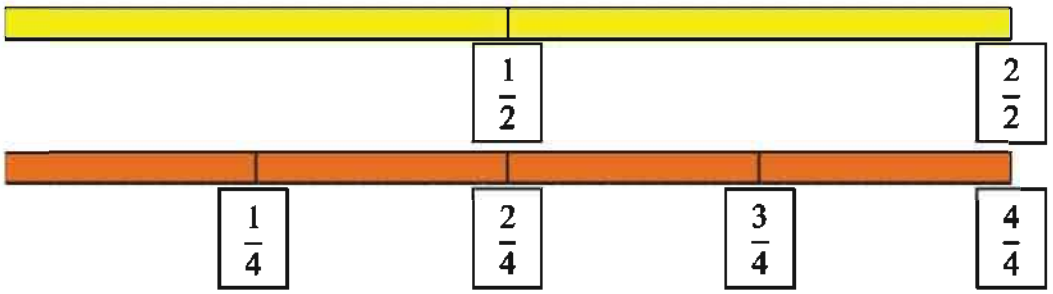


(1) Write the fractions in the boxes.

(2) Where is 5 pieces of $\frac{1}{5}$m on the number line above?

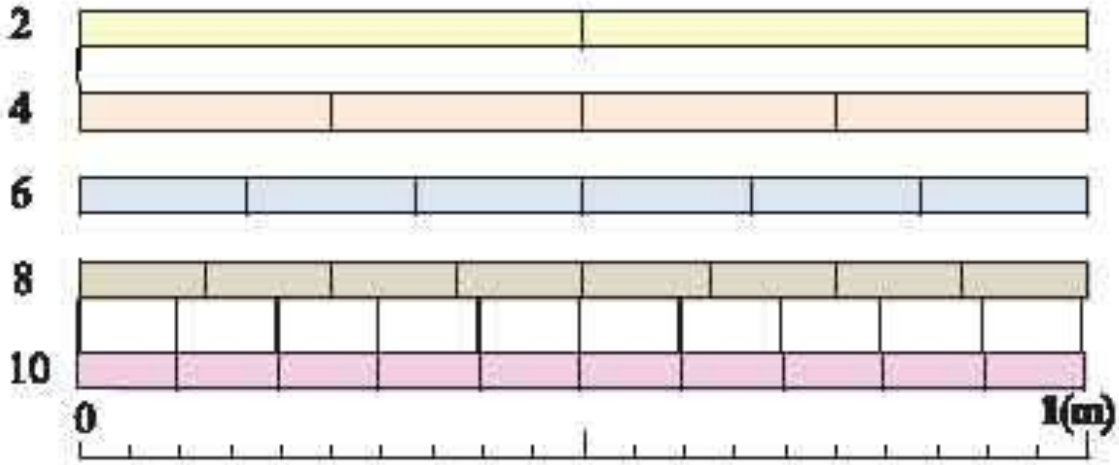
(3) Which is longer, $\frac{3}{5}$m or $\frac{2}{5}$m?

Let us compare the following fractions



$\frac{1}{2}$ and $\frac{2}{4}$ are same!

Then, $\frac{2}{2}$ and $\frac{4}{4}$ are same and equivalent to 1m!



Let us examine the above diagram relating fraction and discuss our findings.

Which fractions are equivalent to $\frac{1}{2}$?

Are there any fractions which have same value each other?

Fractions which are equivalent to $\frac{1}{2}$. shown below

$\frac{2}{4}, \frac{3}{6}, \frac{4}{8}, \frac{5}{10}$

Fractions which have same value each other

$\frac{1}{4}, \frac{2}{8}$

Are there any characteristics of equivalent fractions?
How can we find equivalent fractions systematically?

If we look at $\frac{1}{2}$ and $\frac{2}{4}$.

$\frac{1}{2}$ $\frac{2}{4}$ $\longrightarrow$ $2 \times 2 = 4$, $1 \times 4 = 4$

These numbers will be same. If they are equivalent.

The products of numerator of one fraction with the denominator of the other equivalent fractions are same

8. Let us check the followings also.

$\frac{2}{4}$ $\frac{3}{6}$ $\longrightarrow$ $\frac{3}{6}$ $\frac{4}{8}$ $\longrightarrow$ $\frac{4}{8}$ $\frac{5}{10}$ $\longrightarrow$

Look at $\frac{1}{2}$.If we multiply 2 to the numerator and denominator, we will get $\frac{2}{4}$.

$$\frac{1 \times 2}{2 \times 2} = \frac{2}{4}$$

$$\frac{1 \times 3}{2 \times 3} = \frac{\square}{\square} \qquad \frac{1 \times \square}{2 \times \square} = \frac{4}{8} \qquad \frac{1 \times 5}{2 \times 5} = \frac{\square}{\square}$$

Equivalent fractions can be obtained by multiplying numerator and denominator of a fraction by the same number.

9. Find equivalent fractions of $\frac{1}{3}$ and $\frac{1}{4}$ by using same method like above.

10. Write equivalent fractions in the blank.

Fraction	Equivalent fraction	Equivalent fraction	Equivalent fraction	Equivalent fraction	Equivalent fraction	Equivalent fraction
$\frac{2}{3}$	$\frac{4}{6}$	$\frac{6}{9}$				
$\frac{3}{4}$						
$\frac{2}{5}$						
$\frac{1}{6}$						
$\frac{1}{7}$						

11. Check the following pairs of fractions are equivalent or not. Write calculation and tick (√) whether they are equivalent or not.

Fraction	Calculation	Equivalent	Not equivalent
$\frac{2}{5}, \frac{4}{10}$	$2 \times 10 = 20$ $5 \times 4 = 20$	✓	
$\frac{2}{3}, \frac{3}{5}$			
$\frac{3}{4}, \frac{9}{12}$			
$\frac{4}{6}, \frac{8}{12}$			
$\frac{4}{7}, \frac{16}{28}$			
$\frac{3}{5}, \frac{9}{10}$			

Do ourselves

1. Write fractions which have indicated denominator and numerator.

(1) numerator 2 denominator 5

(2) denominator 9 numerator 5

2. Find the 3 equivalent fractions for the following fractions.

Fraction	Equivalent fraction	Equivalent fraction	Equivalent fraction
$\frac{1}{5}$			
$\frac{2}{7}$			
$\frac{1}{8}$			

3. Check the following pairs of fractions are equivalent or not. Write calculation and tick (√) whether they are equivalent or not.

Fraction	Calculation	Equivalent	Not equivalent
$\frac{1}{3}, \frac{4}{9}$			
$\frac{3}{5}, \frac{9}{15}$			

4. Compare the following pair of the fractions which is greater and smaller by using symbol (< , >).

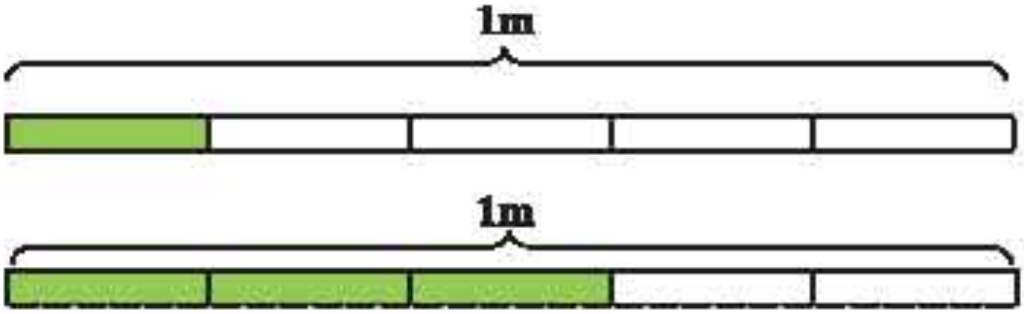
(1) $\frac{1}{4}$ $\frac{3}{4}$ (2) $\frac{2}{5}$ $\frac{1}{5}$

(3) $\frac{5}{7}$ $\frac{4}{7}$ (4) $\frac{8}{9}$ 1

If denominators are same, we just compare numerators. We can do same as comparing numbers.

8.2 Addition of Fraction

There is $\frac{1}{5}$ m and $\frac{3}{5}$ m strings. If we add them, how many meters altogether?



How can we calculate $\frac{1}{5}+\frac{3}{5}$?

How many $\frac{1}{5}$ m are there in $\frac{1}{5}$ and $\frac{3}{5}$?

There are 1 and 3 of $\frac{1}{5}$ m

$$\frac{1}{5}+\frac{3}{5}=\square$$

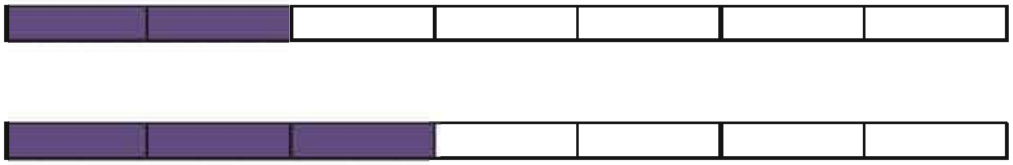
Total : $\square$ **m**

1. Explain how to calculate

$$\frac{2}{5}+\frac{3}{5}=\frac{5}{5}$$
$$=1$$

When we add fractions with same denominator, the denominator of the answer will be the same as the common denominator and the numerator will be the sum of the numerators of the fractions.

2. Calculate $\frac{2}{7} + \frac{3}{7}$



$$\frac{2}{7} + \frac{3}{7} = \square$$

3. Calculate

(1) $\frac{1}{2} + \frac{1}{2} =$ (2) $\frac{2}{3} + \frac{1}{3} =$ (3) $\frac{2}{4} + \frac{1}{4} =$

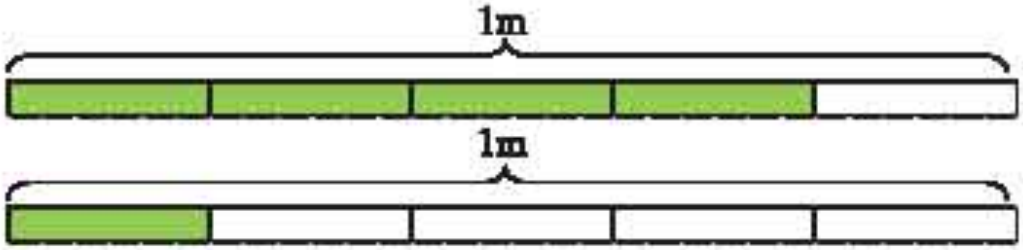
(4) $\frac{2}{5} + \frac{3}{5} =$ (5) $\frac{1}{7} + \frac{4}{7} =$ (6) $\frac{1}{4} + \frac{2}{4} =$

(7) $\frac{1}{6} + \frac{3}{6} =$ (8) $\frac{3}{8} + \frac{4}{8} =$ (9) $\frac{2}{5} + \frac{3}{5} =$

(10) $\frac{1}{7} + \frac{6}{7} =$ (11) $\frac{5}{9} + \frac{2}{9} =$ (12) $\frac{7}{8} + \frac{1}{8} =$

8.3 Subtraction of Fraction

Reza has $\frac{4}{5}$ m of string. If he gives $\frac{1}{5}$ m of string to Meena, how long string will be left?



How many $\frac{1}{5}$ m are there in $\frac{4}{5}$ and $\frac{1}{5}$

There are 4 in $\frac{4}{5}$ and 1in $\frac{1}{5}$

$$\frac{4}{5}-\frac{1}{5}=\square$$

$\square$ m

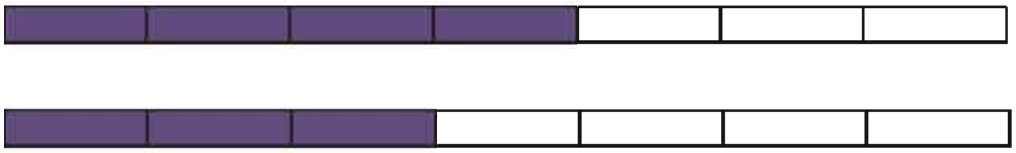
1. Explain how to calculate

$$1-\frac{3}{5}=\frac{2}{5}$$

$$1=\frac{\square}{5}$$

When we subtract fractions with same denominator, the denominator of the answer will be the same as the common denominator and the numerator will be obtained by subtracting the numerators of subtrahend from the numerator of minuend.

2. Calculate : $\frac{4}{7} - \frac{3}{7}$



$\frac{4}{7} - \frac{3}{7} =$ ☐

3. Calculate :

(1) $\frac{2}{3} - \frac{1}{3} =$ (2) $\frac{3}{4} - \frac{2}{4} =$ (3) $\frac{4}{5} - \frac{2}{5} =$

(4) $\frac{5}{6} - \frac{1}{6} =$ (5) $\frac{6}{7} - \frac{5}{7} =$ (6) $\frac{7}{9} - \frac{2}{9} =$

(7) $1 - \frac{3}{4} =$ (8) $\frac{5}{8} - \frac{3}{8} =$ (9) $1 - \frac{7}{8} =$

(10) $\frac{5}{6} - \frac{3}{6} =$ (11) $\frac{8}{9} - \frac{5}{9} =$ (12) $1 - \frac{4}{9} =$

8.4 Do ourselves

1. The numerators and denominators of some fractions are given below. Write the fractions.

(1)	numerator	7	denominator	9
(2)	denominator	17	numerator	5
(3)	numerator	11	denominator	15
(4)	denominator	8	numerator	3

2. Find 3 equivalent fractions for the following fractions.

Fraction	Equivalent fraction	Equivalent fraction	Equivalent fraction
$\frac{5}{6}$			
$\frac{3}{7}$			
$\frac{2}{9}$			

3. Check the following pairs of fractions are equivalent or not. Then write equivalent or not equivalent.

(1) $\frac{2}{5}, \frac{3}{10}$ ☐ (2) $\frac{1}{4}, \frac{4}{16}$ ☐

(3) $\frac{2}{7}, \frac{6}{21}$ ☐ (4) $\frac{4}{6}, \frac{2}{3}$ ☐

(5) $\frac{10}{25}, \frac{2}{5}$ ☐ (6) $\frac{3}{8}, \frac{6}{24}$ ☐

4. Do addition

(1) $\frac{1}{3}+\frac{1}{3}=$ (2) $\frac{2}{4}+\frac{2}{4}=$ (3) $\frac{1}{9}+\frac{2}{9}=$

(4) $\frac{2}{3}+\frac{1}{3}=$ (5) $\frac{5}{7}+\frac{1}{7}=$ (6) $\frac{2}{8}+\frac{5}{8}=$

(7) $\frac{1}{6}+\frac{5}{6}=$ (8) $\frac{2}{5}+\frac{2}{5}=$ (9) $\frac{6}{9}+\frac{3}{9}=$

(10) $\frac{2}{4}+\frac{1}{4}=$ (11) $\frac{1}{5}+\frac{3}{5}=$ (12) $\frac{2}{8}+\frac{6}{8}=$

5. Do subtraction

(1) $\frac{5}{6}-\frac{4}{6}=$ (2) $\frac{3}{4}-\frac{1}{4}=$ (3) $\frac{2}{5}-\frac{1}{5}=$

(4) $\frac{6}{7}-\frac{2}{7}=$ (5) $\frac{2}{6}-\frac{1}{6}=$ (6) $\frac{7}{8}-\frac{5}{8}=$

(7) $\frac{6}{9}-\frac{3}{9}=$ (8) $1-\frac{5}{6}=$ (9) $1-\frac{8}{9}=$

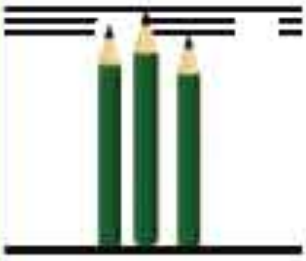
(10) $\frac{4}{7}-\frac{3}{7}=$ (11) $1-\frac{1}{2}=$ (12) $\frac{8}{9}-\frac{8}{9}=$

9. Measurement

9.1 Length

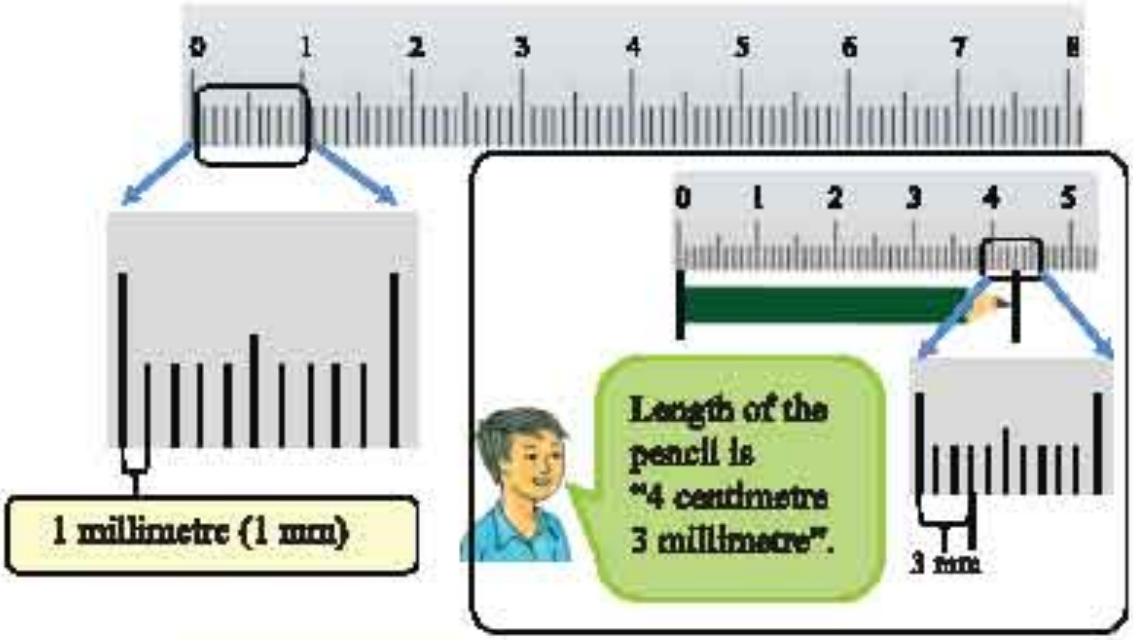
Let's measure some pencils which have almost same length.

We learnt how to measure things using scale. But their difference is less than 1 centimetre



Is there any smaller unit than "centimetre"?

We learnt unit "meter" (m) and "centimetre" (cm) for measuring length. When we measure the length smaller than 1 centimetre, we use a unit "millimetre" (mm).



Unit for length

1 metre = 100 centimetre
1 centimetre = 10 millimetre

Use your scale to measure the length of your pens, pencils, erasers, notebooks, textbooks, etc down to the millimetre. Tell each other how many centimetre and millimetre they are?

Is there any other unit? When I travelled long distance, I heard other unit. But I cannot remember.

That is "kilometre"
We use this for lengths

1 kilometre (km) = 1000 metre (m)

Let us summarize all units related to length. We already learnt millimetre, centimetre and metre.

Unit for length

1 kilometre = 1000 metre (m)
1 metre = 100 centimetre
1 centimetre = 10 millimetre

If your height is 1 m 32 centimetre, how many centimetres are in 1 metre 32 centimetre?

We know 1 metre = 100 centimetre!

1 metre 32 centimetre = 100 centimetre + 32 centimetre
= 132 centimetre

Hights 132 centimetre

Reza measures his foot and its length is 21 centimetre. Change the unit to millimetre.

1 centimetre = 10 millimetre

21 centimetre = 21 × 10 millimetre
= 210 millimetre

Leangth 210 millimetre

Convert 4 kilometres to metre.

1 kilometre = 1000 metre (m)

4 kilometre = 4 × 1000 metre
= 4000 metre

4 km= 4000 metre

Fill the following blanks.

(1) 15 centimetre = ☐ millimetre

(2) 29 centimetre = ☐ millimetre

(3) 59 centimetre 6 millimetre = ☐ millimetre

(4) 5 metre = ☐ centimetre

(5) 7 metre 50 centimetre = ☐ centimetre

(6) 7 kilometre 350 metre = ☐ metre

(7) 34 metre 48 centimetre = ☐ centimetre

(8) 1 metre = ☐ millimetre

metre ⇨ centimetre ⇨ millimetre

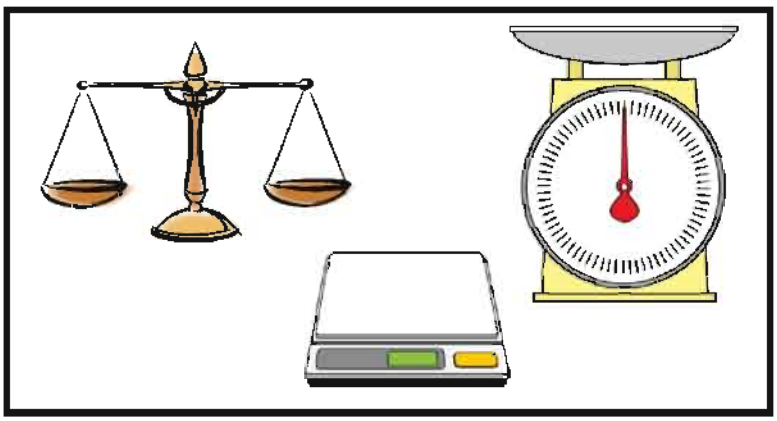
(9) 3 metre 24 centimetre = ☐ millimetre

9.2 Weight

How can we weigh heavy things like jackfruit?

This fruit is very big! How can we weigh?

We learnt how to weigh in Grade 2.



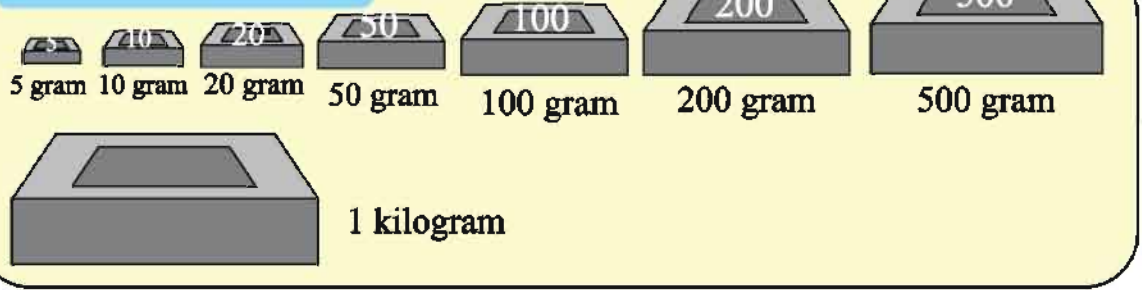
When we weigh heavy things, we use kilogram. 1 kilogram is equivalent to 1000 gram.

Unit for weight

1 kilogram = 1000 gram

There are many kinds of weights to weigh things.

Standard weights



If we weigh the thing which has 755 gram weight by using standard weights, which standard weights should we use?

500 gram <755 gram < 1 kilogram

Use 500 gram standard weight.
755 – 500 = 255

500gm

200 gram < 255 gram < 300 gram

Use 200 gram standard weight.
255 – 200 = 55

500 + 200 = 700

50 gram < 55 gram < 100 gram

Use 50 gram standard weight.
55 – 50 = 5

700 + 50 = 750

Use 5 gram standard weight.
5 – 5 = 0

750 + 5 = 755

Therefore to weigh 755 gram material we use 500 gram, 200 gram, 50 gram and 5gram weights.

We check from heaviest standard weight one by one.

Let us think how to weigh 2 kilogram 375 gram by standard weight.

1 kilogram × 2
200 gram × 1
100 gram × 1
50 gram × 1
20 gram × 1
5 gram ×1

We can weigh also by

1 kilogram × 2
100 gram × 3
50 gram × 1
20 gram × 1
5 gram ×1

There are many other combinations also!

Think how to weigh 1 kilogram 630 gram by standard weight.

Let us convert 3 kilogram 265 gram into gram.

We know 1 kilogram = 1000 gram

3 kilogram 265 gram = 3 × 1000 gram + 265 gram
= 3000 gram + 265 gram
= 3265 gram

3 Kilogram 265 gram = 3265 gram

Answer the following questions.

(1) Convert 7 kilogram into gram

(2) Convert 4 kilogram 8 gram into gram

(3) Convert 5 kilogram 389 gram into gram

(4) Convert 9 kilogram 909 gram into gram

(5) Convert 9000 gram into kilogram

(6) Convert 2000 gram into kilogram

(7) Convert 10000 gram into kilogram

(8) When Rahima Begum weighed some quantity of rice, she used 2 weights of 1 kilogram, 1 weight of 500 gram and 2 weights of 100 gram. What was the weight of that quantity of rice?

(9) The weight of a packet of sugar is 1 kilogram 250 gram. How can the bag be weighed with least number of measuring weights?

9.3 Time

We learnt in grade 2, a clock has 3 kinds of hands. The shortest one indicates "hour", the second longest one indicates "minute" and the longest one indicates "second". The numbers from 1 to 12 indicates hours.

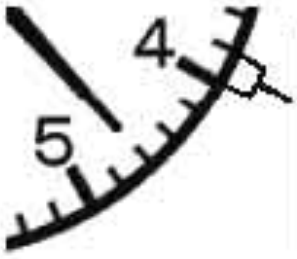
Unit for time

Second, Minute, Hour

Relationship between the units of time

60 seconds	=	1 minute	24 hours	=	1 day
60 minutes	=	1 hour	7 days	=	1 week
			365 days	=	1 year

What time is it?



There are 60 of this scale in a clock. 1 hour = 60 minutes, so this one scale indicates 1 minute.

There are five divisions between a number and the next number.

The minutes hand indicates 23 minutes, so the answer is...

1:23

1. What time is it?

2 O'clock

8 hour 30 minute

2. What time is it?

3. Tell the time and write it in the blank space

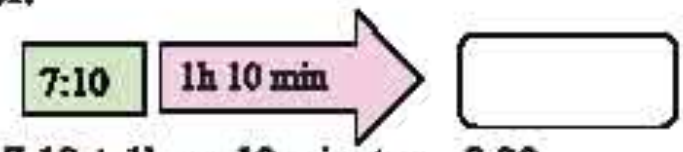
How many seconds are in 2 minutes?

I know, 1 minute = 60 seconds

60 seconds × 2 = 120 seconds.

2 minutes = 120 seconds

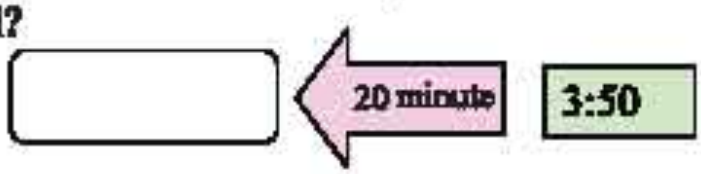
It takes 1 hour 10 minutes to go from Reza's house to his school. If he leaves his house at 7:10, what time does he arrive at the school?



7:10 + 1hour 10 minutes = 8:20

arrive at 8:20

It takes 20 minutes to go from Meena's school to her house. If she arrive her house at 3:50, what time does she leave her school?



3:50 – 0:20 = 3:30

leave at 3:30

4. Sujon walks daily for 1 hour 45 minutes in the morning and 2 hours 10 minutes in the evening. How much time does he walk daily?

5. Mitu went to school at 7:25 and came back at 11:40 in the morning. How much time was Mitu out of home?

9.4 Do ourselves

1. Fill the blank spaces.

(1) 2 metre = ☐ centimetre (2) 3 kilogram = ☐ gram

(3) 3000 gram = ☐ kilogram (4) 400 centimetre = ☐ metre

2. Match with the correct unit by drawing a line

Distance from Dhaka to Rajshahi	gram
Length of an exercise book	metre
Weight of a bag of salt	centimetre
Length of a door	kilogram
Weight of a book	kilometre

3. Express in metre

(1) 5 kilometre (2) 7 kilometre 250 metre
(3) 9 kilometre (4) 9 kilometre 750 metre

4. Express in gram

(1) 4 kilogram (2) 6 kilogram
(3) 7 kilogram 300 gram (4) 8 kilogram 850 gram

5. Express in centimetre

(1) 15 metre (2) 30 metre
(3) 20 metre 25 centimetre (4) 45 metre 60 centimetre

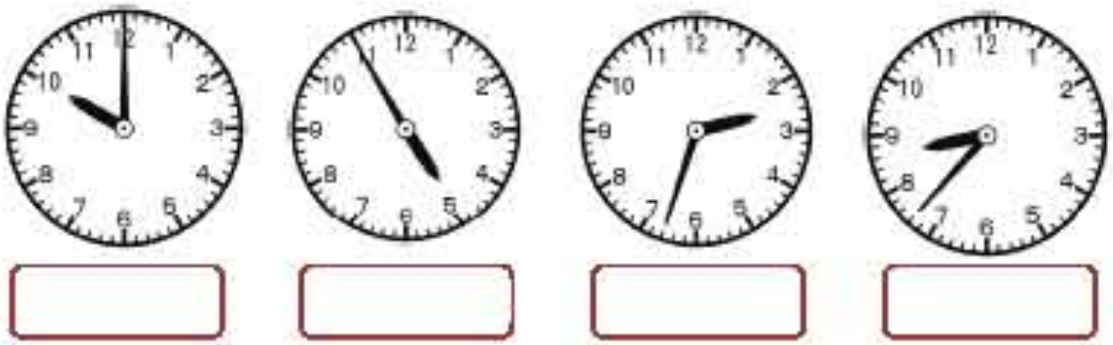
6. Express in millimetre

(1) 2 metre 20 centimetre (2) 7 metre
(3) 8 metre 23 centimetre 9 millimetre

7. The weight of a bag of potato is 2 kg 750 gram. How can the bag be weighed with least number of measuring weights?

8. We draw a line-segment of length 9 centimetre.

9. Write the time in the blank spaces.



10. Rimon's school close at 4:15 in the afternoon. He takes 40 minutes to reach home. At what time does he reach home?

11. Ritu reads 2 hours 20 minutes in the morning and 3 hours 35 minutes at night. How much time does she read daily?

12. Mathematics class of a school starts at 8:30 and breaks after 40 minutes. At what time does the Mathematics class break?

13. In the morning, Mr. Mizan went out at 6:10 for a walk and returned at 6:55. How much time did Mr. Mizan walk?

14. One day rain started at 9:20 in the morning. The rain stopped at 12:45 at noon. How long did it rain?

15. Boby starts reading at 7:25 in the evening. He finishes reading at 10:40 at night. How long does he read?

16. If you travel 50 minutes by bus and 20 minutes by rickshaw, how long do you travel altogether?

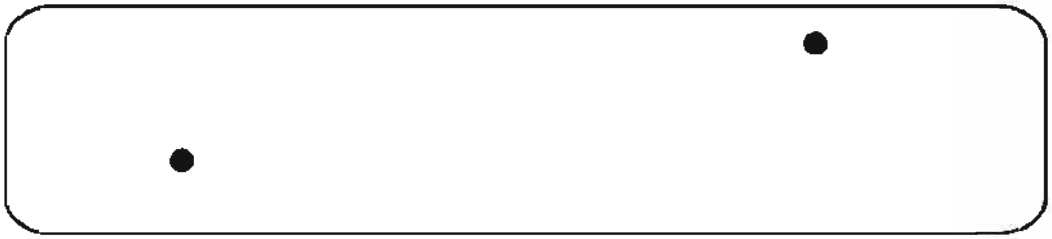
10. Geometry

10.1 Points, Lines and Surfaces

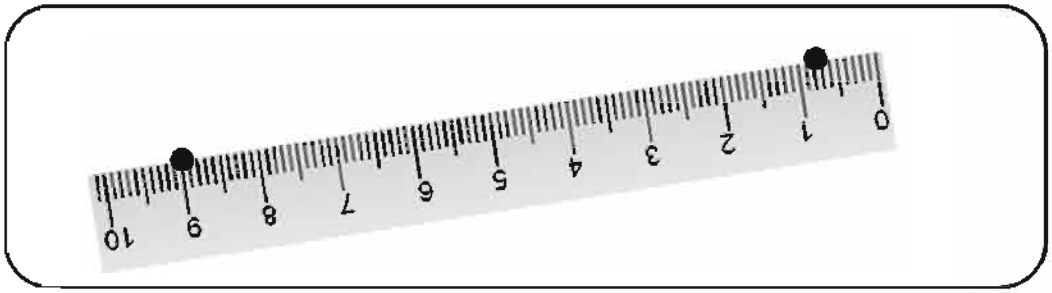
Let us draw lines.

How can we draw straight line?

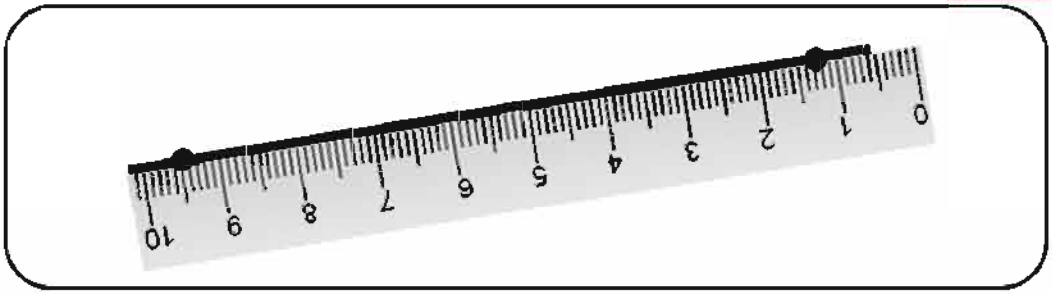
First, we draw small two dots like this.



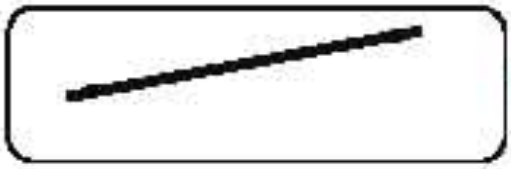
Put on the scale along these two dots.



Then, draw a line by pencil like this.

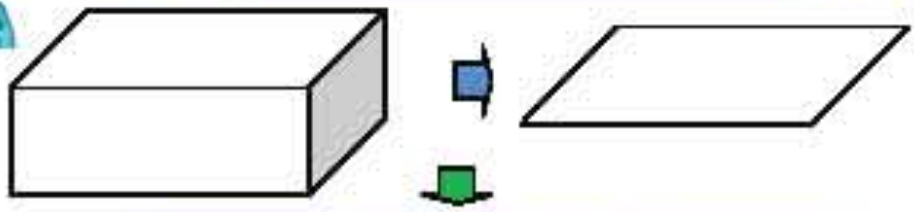


We call these dots "points".



We call this "line".

How do we call outer part of a cuboid?



We call this "surface".
Especially this case we call "flat surface".

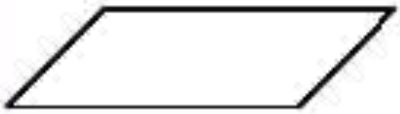
All sides of a cuboid are "flat surface".

How about a surface of ball?

We call this "curved surface".

If it is not a flat surface then it is a curved surface.

Note:

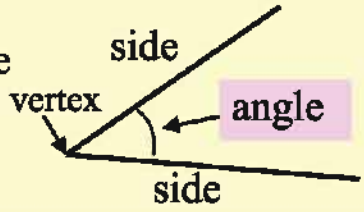


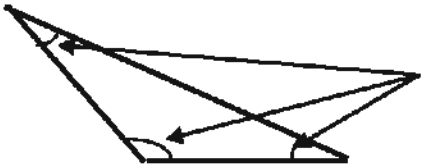
The side of a paper is a line.
The place where the two sides meet (vertex) is a point.

Discuss with your friend to find points, lines, flat surface and curved surface from things around you. (Books, table, ball, etc.)

10.2 Angle

Two lines from a vertex make a shape called an angle.

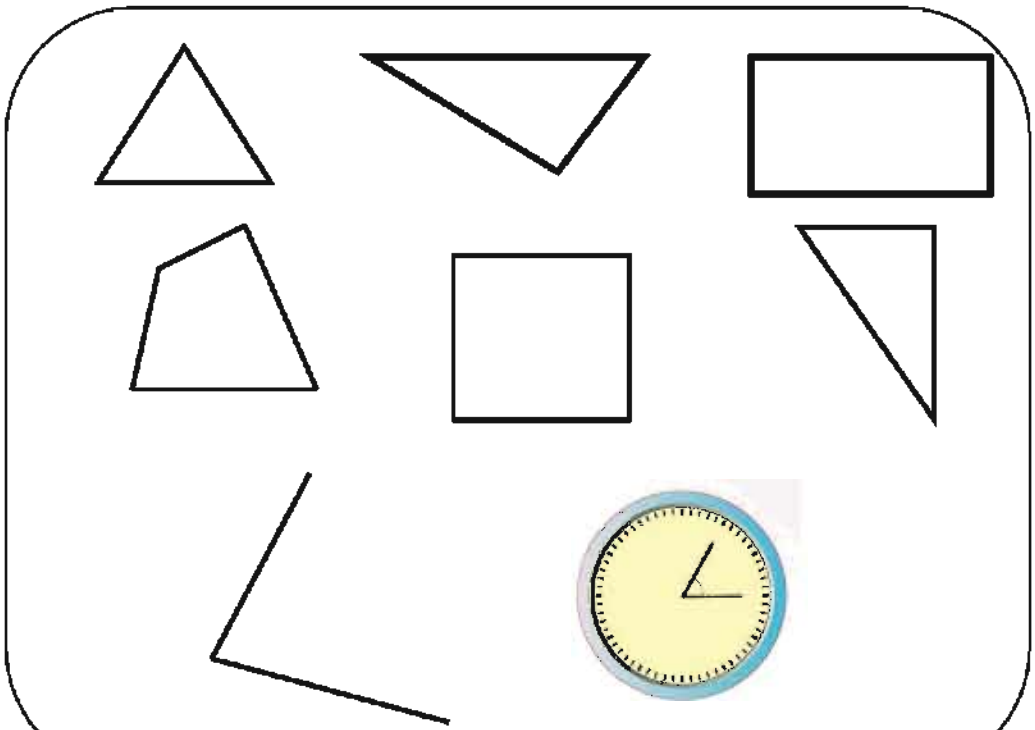




These are all angles

Indicate angles on the following figures.

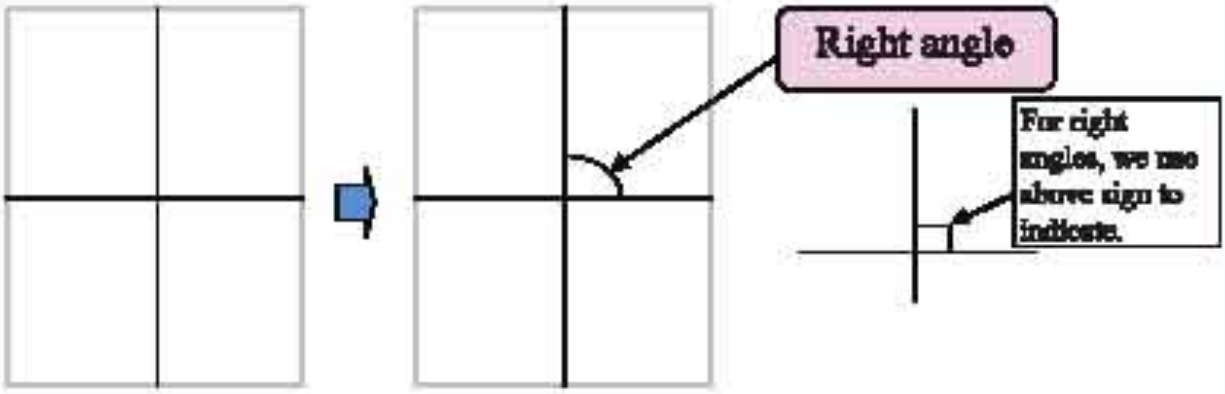
Indicate using (like

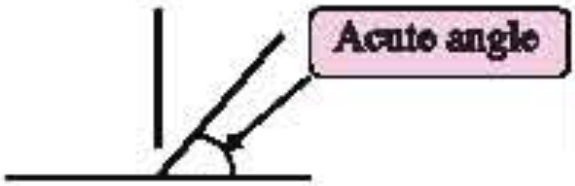


Let us think about types of angles.

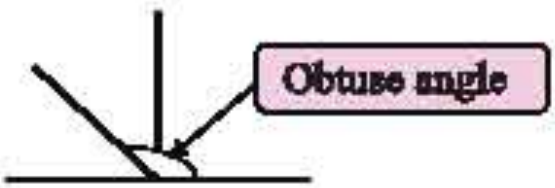
We folds a sheet of paper at the middle. Again we fold the folded paper crosswise. (Figure below)

We draw lines along folds. Four angles are formed at the meeting point of the lines. Each one of them is called a right angle.



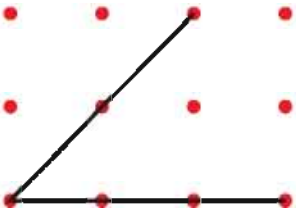


If the angle is smaller than a right angle, we call this 'acute angle'.



If the angle is greater than a right angle, we call this 'obtuse angle'.

Let us draw different kinds of angles on the following dot paper and write right angle or acute angle or obtuse angle.



10.3 Quadrilaterals

How can we identify difference of these shapes?

We learnt about quadrilateral somehow in grade2.

A shape that is enclosed by 4 straight lines is called a quadrilateral.

What is the difference between these two quadrilaterals?

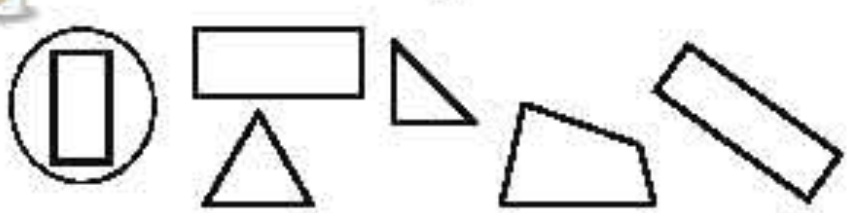
Look at their angles!

A quadrilateral where all 4 corners are right angle is called a 'rectangle'.

If we look at the length of the opposite sides of a rectangle, what can you find?

The opposite sides of a rectangle have the same length.

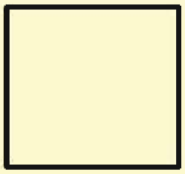
1. Let us circle rectangles.



Is there any difference between them?

I think that 4 sides of left figure are of same length.

A quadrilateral where all 4 corners are right angle and all 4 sides have the same length is called a **square.**



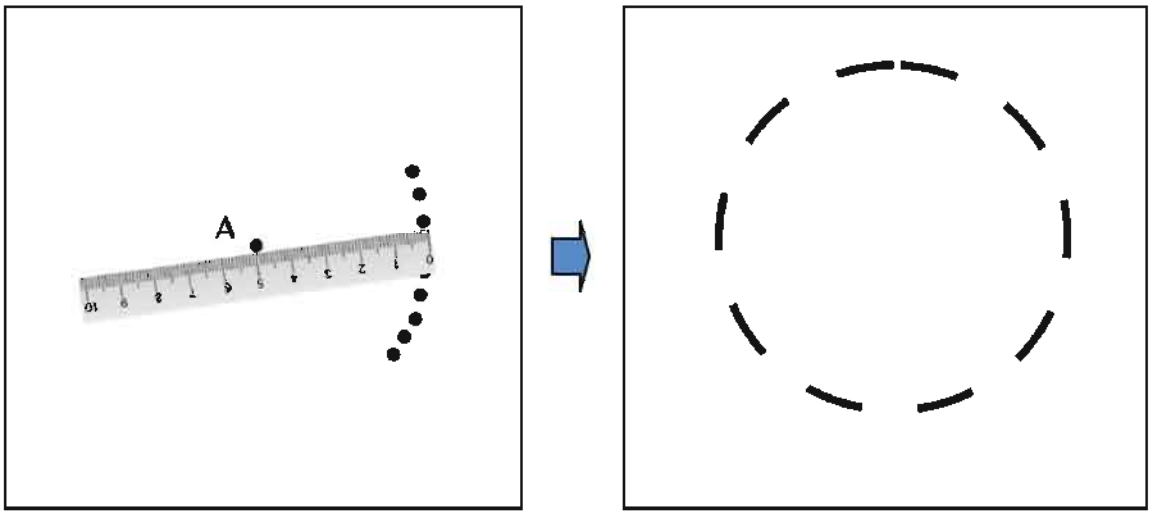
2. Let us tick (√) by the side of the figure which is a quadrilateral. And if they are rectangle or square, please write on the right side.

✓		name	✓		name

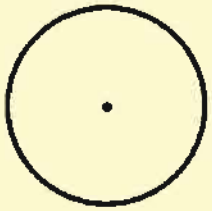
3. Let us draw rectangles and squares of different sizes on the following dot paper and write the name rectangle and square.

10.4 Circles

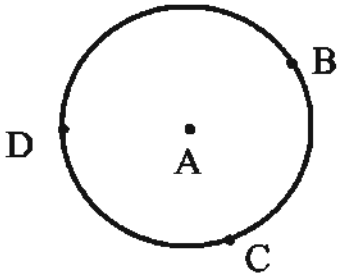
Prepare a sheet of paper and write down point A at the centre of the sheet. Then mark as many points as you can that are 5 cm from point A.



A round shape like this is called a **circle**. The dot inside the circle is called **centre**.



How long is the length from point A to B, C and D?

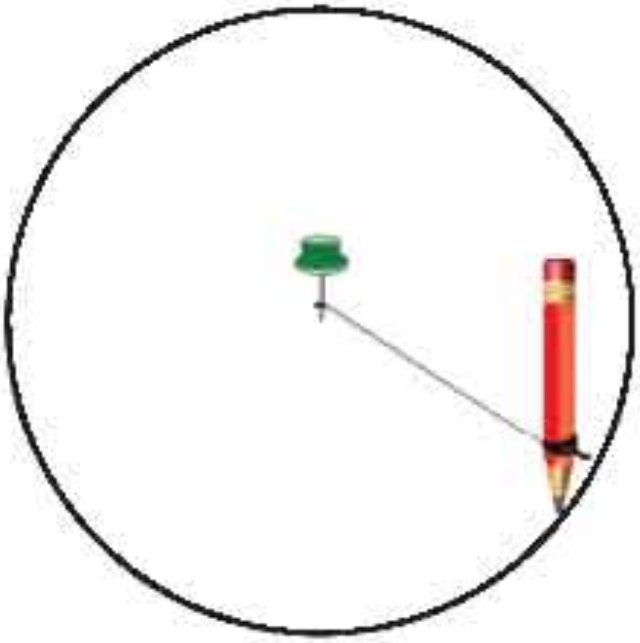


The length from centre A to B, C and D are the same

The lengths from centre A to a circle are the same.

Let us think about another method to draw a circle.

Let us fix a board pin on a paper and tie a thread with the pin. At the other end of the thread, we attach a sharp pencil. Then with the thread kept tight, we draw a line by moving the pencil around the pin. A circle is thus drawn.



I think we can use a bangle also. If we draw a line around the bangle, we can draw a circle.

Do ourselves

1. Let us draw circles using various kinds of round objects.
2. Let us draw a circle using thread and pencil.
3. After you draw a circle, cut out the circle and think about how to find the centre of the circle. (You fold the circle in half and...)
4. Draw a circle. Fold the circle. Now think,how to find the centre of the circle.

THE END

Academic year 2019, Math-3

Cut your coat according to your cloth

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